

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS AMERICA, INC.,
SAMSUNG ELECTRONICS CO., LTD.,
Petitioners,

v.

KONINKLIJKE KPN N.V.,
Patent Owner.

Case IPR2025-00502
Patent 9,667,669

**DECLARATION OF REGIS J. "BUD" BATES, JR.
IN SUPPORT OF PATENT OWNER**

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LIST OF EXHIBITS REFERENCED IN DECLARATION

Exhibit	Description
1001	U.S. Patent No. 9,667,669 (“’669 Patent”)
1003	Declaration of Dr. Kevin Almeroth
1005	U.S. Patent Pub. No. 2002/0120749A1 (“Widegren”)
1006	U.S. Patent No. 6,621,793 (“Widegren-793”)
1007	WIPO Publication No. 2007/101473 (“Astrom”)
1008	ETSI TS 183 063 V2.1.0 Technical Specification; “Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); IMS-Based IPTV Stage 3 Specification,” European Telecommunications Standards Institute, dated June 2008 (ETSI TS 183 063)
2002	Curriculum Vitae of Regis J. Bates, Jr.
2003	Change Request, 182 027 CR 088 rev3.1.2, 19tTD080r4, ETSI TISPAN#19-Ter, Sophia Antipolis, 19-23 January 2009
2004	Excerpt of Expert Report of Kevin Jeffay Regarding the Invalidity Of The Asserted Claims Of U.S. Patent No. 8,881,235 and U.S. Patent No. 9,667,669
2005	Claim Construction Memorandum and Order, D.N. 80, <i>Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson et al.</i> , Case No. 2:21-cv-113 (E.D. Tex.)
2006	RFC 2976 - SIP INFO
2007	Draft ETSI RTS 182 027 V3.1.3 (2009-01)
2008	ETSI TISPAN#19 Ter Sophia Antipolis, 19-23 January 2009 WG 2 Meeting Report
2009	Change Request, 183 063 CR 011, 21bTD104r1, ETSI TISPAN#21-bis, Sophia Antipolis, 17-21 August 2009
2010	Draft ETSI TS 183 063 V3.4.2 (2010-09)
2011	ETSI TISPAN#21bis Sophia Antipolis, 17-21 August 2009 WG3 Final Meeting Report
2012	Disclaimer of Claim 14

I, Regis J. “Bud” Bates, Jr., declare as follows:

I. INTRODUCTION

1. I have been retained by Patent Owner Koninklijke KPN N.V. (“KPN”) as a technical expert witness to provide my independent opinions in connection with a petition for *inter partes* review (“IPR”) of U.S. Patent No. 9,667,669 (EX1001, “the ’669 Patent”) in the above-captioned proceeding (IPR2025-00502) before the Patent Trial and Appeal Board (“Board”). Petitioners in this case are Samsung Electronics America, Inc. and Samsung Electronics Co. Ltd. (collectively, “Samsung”).

2. I understand that the Petition (Paper 1, “Petition” or “Pet.”) challenges Claims 2-9, 13-18, 20 and 23 of the ’669 Patent, and KPN has disclaimed Claim 14 of the ’669 Patent. Pet., 2; EX2012 (disclaiming Claim 14). I refer subsequently to Claims 2-9, 13, 15-18, 20 and 23 of the ’669 Patent as the “Challenged Claims.”

3. I further understand that the references relied on in the Petition include: (1) U.S. Patent Publication 2002/0120749 (EX1005, “Widegren”), (2) U.S. Patent No. 6,621,793 (EX1006, “Widegren-793”), (3) WIPO Publication No. 2007/101473 (EX1007, “Astrom”), and (4) European Telecommunications Standards Institute (ETSI) Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN) Technical Specification (TS) 183 063 V2.1.0 (EX1008, “ETSI TS 183 063”). In forming my opinions on this matter, I considered

these papers, as well as the other documents discussed and referenced in this Declaration.

4. I have been asked by KPN to consider whether certain references teach or suggest the features recited in the Challenged Claims.

5. I submit this Declaration to offer my expert opinion that the Challenged Claims are novel and nonobvious in light of the prior art at the time of the invention and are, thus, patentable. This Declaration sets forth the opinions I have reached to date regarding these matters.

6. I am being compensated at my standard hourly consulting rate of \$385 for my time spent on this matter. My compensation is not contingent on the outcome of the IPR or on the substance of my opinions.

7. I have no financial interest in KPN or Samsung. I am not an employee of KPN, Samsung, or any affiliate or subsidiary thereof.

8. My opinions and the bases for my opinions are set forth below.

II. BACKGROUND AND QUALIFICATIONS

9. I am the Founder and President of TC International Consulting, Inc. (“TCIC”). Our offices are located at 3413 Ponderosa Loop, Heber, AZ 85928. At

TCIC, I have consulted and worked with much of the telecommunications industry since 1989.

10. I earned a bachelor's degree in Business Management in 1979 from Stonehill College in Easton, Massachusetts, and I completed coursework towards a Masters of Business Administration ("MBA") degree at Lehigh University in Bethlehem, Pennsylvania and St. Joseph's College in Philadelphia, Pennsylvania. I completed all the coursework but not a thesis required for the MBA degree.

11. Since 1966, I have been involved in designing, building, optimizing and training others in many aspects of telecommunications systems, including multiuser cellular and cable-based systems as well as Private Branch Exchange ("PBX") and computer networks. In that time, I have had an active role in the growth of the telecommunication industry and have personally witnessed, and contributed to, the industry's growth in terms of various technologies, infrastructure, legal services, regulatory services, and technical services.

12. My experience spans all layers of the Open Systems Interconnection ("OSI") model, including the physical, data-link (including media access control), and network layers. For example, in my various professional roles, described below, I have been responsible for implementing telecommunications systems up to the application layer.

13. I have written numerous books on telecommunications technology, many of which have been best sellers for publisher McGraw-Hill. My textbook titled "Voice and Data Communications Handbook" led McGraw-Hill's sales for three consecutive years and has been used by over 166 colleges and universities around the world. Other books that I have written include "Wireless Networked Communications," "Wireless Broadband Communications," "cdmaOne and cdma2000," "General Packet Radio Services (GPRS)," "Principles of Voice and Data," "Broadband Telecommunications Handbook," and "Optical Networking and Switching." I am the co-author of a book entitled "Wireless Networks Dictionary" published by Althos Publishing.

14. I have personally developed curricula and taught telecommunications classes on-site with many of the world's leading manufacturers and providers of telecommunications equipment and services. These have included classes titled or on the following topics "Introduction to Voice Communications," "Hands on Telephony," "Installing and Implementing a PBX Solution," "Hands on Voice over IP," "Implementing VoIP," "Securing VoIP," "IP PBX Solutions," "Call Center Convergence," "Introduction to Data Communications," "Hands on Data Communications," "LAN and WAN Communications," "Introduction to T1 and T3," "Optical Networking and SONET," "Data and Internet Communications, a How to Course for Implementing Solutions," "Ethernet and Gigabit Ethernet,"

“Asynchronous Transfer Mode (ATM),” “Frame Relay a Data Communications Design,” “Wireless Communications,” “Hands on Securing Wireless Networks,” “Hands on Integrating Wireless Networks,” “TCP/IP,” “Linking LANs and WANs with Bridging and Routing,” “GPRS,” “GSM (including WAP and MMS),” “Next Generation Wireless,” “Cisco RF Design,” and “Cisco Wireless Mesh.” As indicated by these names and titles, I have deep experience teaching others about the implementation and use of telecommunications networks at varying levels of generality and at most layers of the OSI protocol stack.

15. I have also been personally involved in developing curricula and teaching courses on the certification of products and services with various technical specifications and standards, including Wi-Fi Certification (CWNA), Wi-Fi Security Certification (CWSP) CompTIA courses on WiMAX certification (Wi-MAX RF Engineer), RFID Certification (RFID+), and Convergence Technologies Professional Certification (CTP).

16. Through my decades of close involvement with the telecommunications industry, I have first-hand knowledge regarding the relationship between service providers and carriers, on one hand, and their equipment vendors, on the other, including the extent to which providers and carriers dictate and require that equipment be certified to, or otherwise comply with, standards specifications and other technical requirements. I am also familiar with the extent to, and manner

in which, providers and carriers evaluate vendor equipment on technical and business grounds, select certain equipment for use in their network, evaluate the equipment's performance, and determine whether to upgrade such equipment or its associated software. I am also familiar with the criteria and methodologies that providers and carriers use to monitor data activities on their network and the extent to which providers and carriers disallow certain types of network activities or traffic patterns.

17. From 1966 to 1972, I worked as a Captain of the United States Army Signal Corps. In this role, I was immersed in telecommunications technology. I performed communications systems and signal analysis on an almost daily basis and worked in communications system algorithm design, modulation and demodulation techniques, and other technical issues often in the context of rapidly changing and unpredictable network deployment scenarios. For example, while in Vietnam, I worked with mobile and fixed location radio-based systems and installed a system that spanned over 400 miles for military tactical forces. I was responsible for the operation and control of the Automatic Voice Network (AUTOVON) system in Donnersberg, Germany, and I had operational responsibility for the Pirmasens, Germany Satellite terminal. At Fort Devens, I ran the Communications Center, which facilitated telex, Teletype, and facsimile services for the military. I also participated in a six-month program on communications systems and RF basics. I worked in and with fixed and mobile Radio relay VHF systems, satellite systems, a

long haul troposcatter, and various two-way communications models. Based on my work on these and other projects, I received significant telecommunications system training while working for the Army.

18. From 1972 to 1974, I was a Telecommunications and Facilities Manager for Damon Corporation. My responsibilities included overseeing voice and data (limited analog dial up) communications for locations across the country. The corporate communications budget was approximately \$2.5 million annually.

19. From 1974 to 1977, I was Manager of Administrative Services for Hills Department Stores in Canton, MA. In this role, my responsibilities included analyzing, selecting, and implementing major communications projects in 50 stores spread throughout the Eastern and Mid-western United States.

20. From 1977 to 1979, I was Telecommunications Manager for Manufacturing and International Sites for Data General Corporation in Westboro, MA. In this role, I was responsible for selecting equipment (from Bell and competitors) for 100 sites across the world, selecting services (voice, data, and fax traffic) from the common carriers, and selecting the appropriate means and protocols to use these goods and services. I installed a T1 network from coast to coast. I was also responsible for the installation of 30 PBXs and 40 key telephone systems.

21. From 1979 to 1986, I was Telecommunications Manager for Air Products and Chemicals, Inc., with an annual budget of \$50 million. In this role, I

designed, selected, analyzed, and implemented all communications projects for the use of voice and data communications at the corporation's 440 sites around the US and 35 international sites. This included the use of telephone systems, dial up telephony and data, leased lines for voice and data, and analog and digital circuits (including T1, T3 and fiber optics). I was also responsible for research, selection, and installation of over 250 telephone systems (PBX and Key Systems along with integration systems).

22. While at Air Products and Chemicals, Inc., I also worked on a project to integrate the company's voice, data, TV-video, and local area network (LAN) services into what is now known as a Campus Area Network (CAN). The CAN was on a broadband cable television (CATV) system and implemented a "triple play" service on campus well before CATV companies started offering such services. In connection with this project, I worked with major cable providers on various Data Over Cable Service Interface Specification (DOCSIS) services. I understand that the CAN system was studied and written up as a Harvard Business School case related to the integration scheme and other business aspects.

23. From 1986 to 1989, I was Chief Information Officer (CIO) for Pepper, Hamilton and Scheetz, a law firm based in Philadelphia, PA. In that role, I performed complete automation of the firm's multiple offices around the country. I was also responsible for the selection and installation of 10 PBX systems, all with

major integration services, and the design, final installation, and testing of local area networks (LANs). I also created the WAN access and usage through a network of digital circuits using T1 services from many of the common carriers and new competitors in the industry.

24. As noted above, I am President and Founder of TCIC, where I have worked since 1989. At TCIC, I have consulted and worked with much of the telecommunications industry. I have provided analyses and findings to clients regarding the selection of vendors or products and directly provided training in various technologies including Voice, Telephone Systems, Data Networks, Video, Internet, Wireless, Wireless LAN Technologies, VoIP systems and services, Fiber Optics, and Infrastructure. My company has been responsible for selecting and implementing over 100 PBX systems for client companies.

25. At TCIC, I develop and conduct training for corporate users, manufacturers, and telecommunications carriers. I have personally trained individuals at all of the Regional Bell Operating Companies (“RBOCs”), over 150 Competitive Local Exchange Carriers (“CLECs”), LTE carriers, including AT&T, MCI/WorldCom (now Verizon), Sprint (now T-Mobile), MetroPCS, Cellular One, most of the large telecommunications equipment manufacturers (Nortel-Networks, Lucent (now Nokia), Avaya, Mitel, Siemens, Alcatel (now Nokia), Newbridge, Marconi, and Cisco), the United States government, and other Fortune 500

companies. I was a badged-contractor for Cisco Systems on their Wi-Fi products and the integration of VoIP over wireless technologies.

26. I have authored approximately 20 books, published numerous articles and papers in magazines, and taught courses and seminars in telecommunications and computers in over a dozen countries globally. I have been a technical editor for IPTV Magazine since 2016. I am a Senior Member of the IEEE. I have also been a keynote speaker at conferences, events, and meetings, including Comdex, the International Communications Association, BICSI, RBOC, and annual meetings for Ameritech and PacBell. I have also been the keynote speaker at Disaster Recovery Journal Annual seminars regarding DR Planning for Telecommunication Networks.

27. To summarize, I have been a true innovator in applying and implementing technologies for my clients over the years. As a Technology Consultant, I have led the way for my clients in the installation of various wired and wireless technologies. My books have been used as reference materials in 166 colleges and universities around the world. Through many of my recommendations, major clients including the U.S. Army, U.S. Navy, C.I.A., networking corporations, and large corporate clients have installed huge networks including optical networks, wireless (cellular, satellite, and microwave), and saved immense amounts of time and money in the installation and operation of these services. Additional information regarding my background, qualifications, publications, and

presentations is included as part of my *curriculum vitae* (“CV”), which is included in EX2002.

28. Further, I have served as an expert witness in several IPR proceedings, district court patent infringement cases, and International Trade Commission (“ITC”) investigations in the field of telecommunications, as shown in my CV.

29. Based on my experiences described above, and as indicated in my CV, I am qualified to provide the following opinions regarding the ’669 Patent.

30. Ericsson Inc. filed a petition for *inter partes* review against the ’669 Patent in IPR2022-00557 and I submitted expert testimony in the proceeding. *Ericsson Inc. v. Koninklijke KPN NV*, IPR2022-00557, Paper 34, at 7 (PTAB Oct. 4, 2023).

31. In IPR2022-00557, the Board credited my expert testimony and found that Ericsson did not prove that Claims 2, 3, 6, and 8 of the ’669 Patent are unpatentable. *See, e.g., id.* at 32. For example, the Board credited my testimony that “adding a media stream is not the same as adding an RTSP session.” *Id.* As another example, the Board credited my testimony that a Change Request to ETSI

TISPAN Technical Specification 182.027 “has nexus to and is reasonably commensurate with” Claims 1 and 21 of the ’669 Patent. *Id.* at 29.

32. I have reproduced some of my prior testimony in IPR2022-00557 in this Declaration, along with additional opinions that are responsive to Dr. Almeroth’s Declaration.

III. BASES OF OPINIONS – ASSIGNMENT AND MATERIALS CONSIDERED

33. I have been asked to analyze the alleged obviousness of the Challenged Claims in light of Widegren, Widegren-793, Astrom, and ESTI TS 183 063. I have also been asked to respond to the opinions set forth in Dr. Almeroth’s Declaration (EX1003).

34. In forming my opinions, in addition to my education, knowledge, and experience, I have reviewed and considered the ’669 Patent and each of the documents and things listed in the List of Exhibits above and the other documents cited in my Declaration. I have also reviewed all of the other exhibits cited in the Petition.

35. The opinions I have set forth in this Declaration are not exhaustive of my opinions regarding the patentability of the Challenged Claims. Thus, the fact that I do not address a particular point should not be understood to indicate that any issued claim of the ’669 Patent is not patentable and/or does not comply with the

requirements of any applicable patent law, patent rule, or other applicable statute, case law, or rule.

36. I reserve the right to amend and supplement this Declaration in light of additional evidence, arguments, or testimony presented during this IPR or during any other proceedings related to the '669 Patent.

IV. MY UNDERSTANDING OF CERTAIN LEGAL STANDARDS

37. I am not a legal expert and offer no opinions on the law. However, I have been informed by counsel of the various legal standards that apply, some of which I have set forth my understanding below, and I have applied these standards in arriving at my conclusions.

38. I understand that for a claim to be found unpatentable in this proceeding, Samsung must prove that the claim is unpatentable by a preponderance of the evidence. Put another way, Samsung must show the claim is more likely than not anticipated or obvious in light of prior art.

A. Ordinary Skill in the Art

39. My opinions in this Declaration are based on an understanding of a person of ordinary skill in the art, which I understand is sometimes referred to by the acronym "POSITA," as of the time of the invention.

40. I understand that the '669 Patent issued May 30, 2017, from U.S. Application No. 13/144,385 (the "'385 Application"), which entered national stage

under 35 U.S.C. § 371(c)(1)(2) on July 13, 2011 from PCT No. PCT/EP2010/00278 (the “PCT ’278 Application”) filed on January 19, 2010. EX1001, Code 21, 22, 45, 86, 87. The ’385 Application also claims priority to European Application No. EP09000661 (“EP’661 Application”) filed on January 19, 2009. *Id.*, Code 30.

41. I am treating January 19, 2009, as the priority date (and date of invention) for the purpose of this Declaration only. Samsung’s expert, Dr. Almeroth, also treated January 19, 2009 as the date of invention. EX1003 ¶46.

42. I understand that a POSITA is a hypothetical person who is presumed to be aware of the relevant information that is considered prior art at the time of invention. By “relevant,” I mean relevant to the claims of the ’669 Patent.

43. I understand that, in assessing the level of skill of a POSITA, one should consider the type of problems encountered in the art, the solutions to those problems, the pace of innovation in the field, the sophistication of the technology, the level of education of active workers in the field, and my own experience working with those of skill in the art at the time of the invention.

44. In IPR2022-00557, Ericsson asserted that a POSITA at the time of the ’669 Patent “would be a person with a B.S. degree in electrical engineering, computer engineering, or equivalent training or job experience, with two years of experience in computer networking technology, or a Master’s degree in electrical engineering, computer engineering, or other equivalent degree. Additional

education could compensate for less practical experience and vice versa.” *Ericsson*, IPR2022-00557, Paper 2 at 13. The Board found that Ericsson’s proposed definition of a POSITA was “consistent with the level of ordinary skill in the art reflected by the prior art of record,” and adopted the definition “for purposes of” the Board’s Final Written Decision. *Ericsson*, IPR2022-00557, Paper 34 at 7. I have employed the Board’s definition of a POSITA in IPR2022-00557 for purposes of my opinions in this Declaration.

45. I was at the time of the invention, and am now, one of more than ordinary skill in the art through my background and experience. At the time of the ’669 Patent, I was very familiar with the types of problems encountered in session management and network communications, the types of prior art solutions described in the prior art references raised in this IPR (IPR2025-00502), and the pace at which innovations were made.

46. In this case, Dr. Almeroth has asserted that a POSITA at the time of the ’669 Patent “would have had at least a Bachelor’s degree in Electrical Engineering, Computer Engineering, Computer Science or equivalent, and at least two years of experience with computer networking technology. More education can supplement practical experience and vice versa.” EX1003 ¶47. Dr. Almeroth’s definition differs from the Board’s definition of a POSITA in IPR2022-00557. *Compare Ericsson*, IPR2022-00557, Paper 34 at 7, *with* EX1003 ¶47. For example, the Board’s

definition of a POSITA in IPR2022-00557 includes “or equivalent training or job experience,” and Dr. Almeroth’s definition does not. Dr. Almeroth does not explain why he proposes a different definition of a POSITA than the definition that the Board adopted in IPR2022-00557.

47. But even though Dr. Almeroth omits “or equivalent training or job experience” from his definition of a POSITA, he does include in his definition “[m]ore education can supplement practical experience and vice versa.” EX1003 ¶47. For all the reasons discussed above with respect to the Board’s definition of a POSITA in IPR2022-0057, under Dr. Almeroth’s definition of a POSITA, I was at the time of the invention, and am now, one of more than ordinary skill in the art through my background and experience.

48. Although Dr. Almeroth sets forth a different definition of a POSITA than the Board’s definition of a POSITA in IPR2022-00557, my analysis and conclusion are the same under either definition. Under either definition of a POSITA, I do not believe such a POSITA would have found, at the time the invention was made, the Challenged Claims to be obvious in light of the prior art.

B. Claim Construction

49. I understand that claims are generally interpreted according to their ordinary and customary meaning taking into consideration the so-called “intrinsic evidence” of the patent consisting of (1) the claim language; (2) the specification

and drawings; and (3) the prosecution history. I understand that the Board has discretion to take into consideration so-called “extrinsic evidence” including references (prior art and non-prior art) as well as definitions from dictionaries and treatises.

50. I understand that claim terms may be explicitly defined in the patent specification or they may be implicitly defined through consistent usage in the specification. I also understand that the scope of claim terms may be limited by statements in the specification or prosecution history where the application clearly disavows or disclaims subject matter in a clear and unmistakable manner.

51. I understand that for purposes of this IPR, the standards for claim construction are the same as the standards used in the federal district courts.

C. Obviousness (35 U.S.C. § 103)

52. I understand that a claim is unpatentable as obvious if the claimed subject matter as a whole would have been obvious to a POSITA at the time the invention was made in light of the teachings of a single prior art device, system, method, or reference, or in light of a combination of prior art.

53. I understand that obviousness is a question of law based on underlying factual issues including the level of ordinary skill in the art at the time of the patent’s alleged invention, the scope and content of the prior art, any differences between the

prior art and the claimed invention, and any objective indicia of non-obviousness (if available), also known as “secondary considerations.”

54. I understand that the scope and content of prior art for deciding whether the invention was obvious includes at least prior art in the same field as the claimed invention. The prior art can also come from different fields that a POSITA would have considered when trying to solve the problem that is addressed by the invention.

55. I understand that the existence of each and every limitation of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks from prior art. But, in considering whether a claimed invention is obvious, I understand that one may find obviousness if, at the time of the patent’s alleged invention, there was a reason that would have prompted a POSITA to combine the known elements in a way the claimed invention does, taking into account such factors as (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design need or market pressure to solve a problem and there are a finite number of identified,

predictable solutions; and (6) whether the change resulted more from design incentives or other market forces.

56. I understand that in order for a claim to be rendered obvious by a combination or modification of prior art, it must be shown that a POSITA would have had a motivation to combine or modify the prior art with a reasonable expectation of success that the combination of prior art would result in the claimed invention.

57. I understand that inherency may be used in an obviousness analysis. I understand that for prior art to inherently have or disclose a limitation of the claim, the prior art must necessarily include the claim limitation that is not expressly present or disclosed. I understand that inherency may not be established by probabilities or possibilities.

58. I understand that asserting a proposed modification of a prior art reference is “design choice” does not make it obvious. Instead, one must offer a reason for why a POSITA would have made the proposed modification to the prior art reference.

59. In assessing obviousness, I have been instructed to consider both the ordinary creativity and common sense of a POSITA. However, I also understand that it is impermissible to find obviousness based on hindsight reasoning, i.e., combining prior art using the claimed invention as a template, without establishing

that, as of the date of the invention, there exists a motivation to combine or apparent reason to combine and/or modify the prior art.

60. I understand secondary considerations include commercial success of a product due to the merits of the claimed invention, unexpected results from the claimed invention, a long-felt need that the claimed invention satisfies, failure of others to achieve the claimed invention, skepticism for the claimed invention, praise for the claimed invention, and copying. I understand that secondary considerations evidence is given substantial weight when it has a nexus to, i.e., results from, the merits of the claimed invention. I understand that secondary considerations evidence must be reasonably commensurate with the scope of the claims and generally secondary considerations evidence is reasonably commensurate when it relates to an embodiment within the scope of the claims and there is adequate basis to support the conclusion that other embodiments falling within the claim will behave in a similar manner.

V. THE '669 PATENT AND STATE OF THE ART AT THE TIME OF THE INVENTION

A. Challenges of Managing Associated Sessions in a Network

61. With the growth of IP Multi-Media Subsystem (IMS) architecture, IMS-enabled services are offered that combine sessions from various sources such as audio, video, and other media. EX1001, 1:23-37.

62. IMS-enabled services permit an end user to be an active participant in a multimedia session having multiple underlying media sessions instead of a passive viewer. *Id.* 1:38-40. For example, the end user or network operator can compose a multimedia session from different underlying media sessions (e.g., TV broadcast (BC), content-on-demand (CoD), and user-generated content (UGC)) originating from different sources in the network. *Id.* 1:41-49.

63. As of the '669 Patent's effective filing date, "IMS standards" did not allow for "an end-user and/or the network to compose associated multimedia sessions and to collectively control and/or manage these associated multimedia sessions and their used network resources." *Id.* 2:57-60.

64. One prior art arrangement required setting up multiple parallel sessions for the underlying media sessions. *Id.* 2:47-53. That is, the end user would individually request the transmission of each desired underlying media session, and each parallel session would typically involve the exchange of multiple signaling messages between user equipment and a network element.

65. This prior art arrangement had limitations. For example, in this arrangement, the network element is unaware of the association between the various underlying media sessions that are combined to make up these multimedia services. *Id.* 2:10-15. Without knowing the association between the different underlying media sessions, the network element may not treat each underlying media session uniformly

or in a manner conducive to the multimedia services, which could impact quality of service.

66. For example, in a situation where the network element operates merely as a conduit for underlying media sessions from external sources to the user equipment, the network element would not know that the different underlying media sessions are associated with one another and could not simultaneously pause them. *See id.* 2:17-20. As another example, the network element would not know the association between the different underlying media sessions and might not reserve sufficient bandwidth to accommodate all of them. *See id.* 2:23-24. Accordingly, the network element could allocate bandwidth for a video stream of a multimedia session but might not allocate bandwidth for a corresponding audio stream of the multimedia session.

67. Thus, the '669 Patent provides a description of: (1) some of the problems present at the time in managing associated sessions in a network, (2) some conventional proposed solutions of the time, and (3) limitations of those proposed solutions.

B. Overview of the Invention of the '669 Patent

68. The '669 Patent relates to managing associated sessions in a network. *Id.* 1:14-15. In particular, the '669 Patent describes a method and system for managing associated sessions in a network using a composition session. *Id.* Abstract.

69. The inventors of the '669 Patent noted that the invention of the '669 Patent “reduce[s] or eliminate[s] at least one of the drawbacks known in the prior art,” which are the problems with managing associated sessions in a network discussed in Section V.A. *Id.* 2:66-67.

70. The method and system of the '669 Patent improve over the prior art by allowing multiple underlying media sessions to be associated with and managed using one or more composition sessions, which enables “network centric administration of groups of sessions.” *Id.* 3:25-43, 4:54-55. In embodiments of the '669 Patent, the network element manages “the associated sessions upon request from the network and/or upon triggers initiated by events in the network, without the prior intervention from the user equipment.” *Id.* 4:59-62.

71. In one embodiment, the method and system of the '669 Patent are implemented in an IMS-based Internet Protocol Television (IPTV) system. *Id.* 6:66-67. The example “IPTV system uses [] Session Initiation Protocol (SIP) to setup and control media sessions between” user equipment (UE) and a network element, such as a Service Control Function (SCF) or a Media Function (MF). *Id.* 7:39-42, 7:22-30, 7:9-10. The IPTV system also includes an IMS Core. *Id.* 7:2-3. Further, the IPTV system uses “Session Description Protocol (SDP) carried by SIP signaling . . . to describe and negotiate media components in the session,” and Real Time Streaming Protocol (RTSP) messaging for media control. *Id.* 7:42-45.

72. Figure 2 of the '669 Patent, reproduced below, shows one example of a protocol flow for initiating a composition session using a composition session identifier. *Id.* 8:59-64.

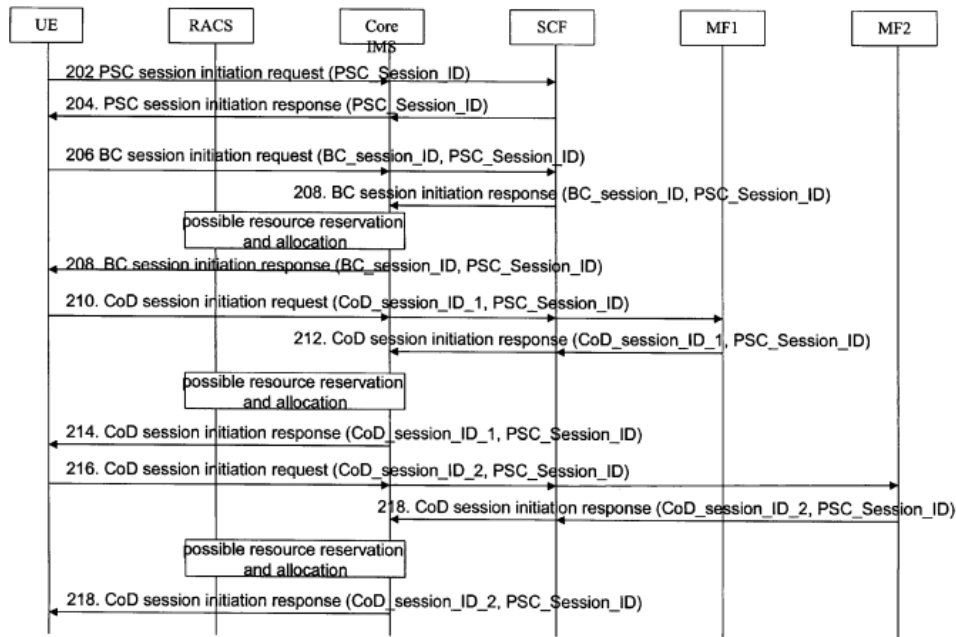


Figure 2

73. In Figure 2, the composition session is a personalized stream or service composition (PSC) session, and the composition session identifier is referred to as PSC_Session_ID. *See id.* 8:59-67, 9:24-27. The composition session identifier may be generated or created by the UE or the network element, or provided by a third party, such as an application server via an Electronic Programming Guide. *Id.* 8:1-5. The method associates underlying media sessions by exchanging the composition session identifier between the UE and the network element (for example, network

elements SCF or MF1/MF2), that can initiate the composition session and initiate the associated media sessions. *See id.* 15:13-16.

74. The protocol flow of Figure 2 may begin with an exchange of the PSC_Session_ID between the UE and the SCF in a PSC session initiation request and PSC session initiation response (steps 202-204). In this example, the exchange can be initiated by the UE, which sends the PSC session initiation request to the SCF, and can be completed by receipt at the UE of the PSC session initiation response from the SCF. *Id.* 9:39-10:45. In other examples, the SCF may initiate the exchange. *Id.* 12:1-3. The exchange represented in steps 202-204 of Figure 2 may initiate establishment of the composition session.

75. Next, as shown in Figure 2, the UE can initiate a BC session—i.e., a media session—by another exchange of the PSC_Session_ID with the SCF, this time in a BC session initiation request and BC session initiation response (steps 206-208). This exchange may include a BC_session_ID in addition to the PSC_Session ID and results in a first BC session associated with the composition session. *Id.* 11:5-30.

76. As shown in Figure 2, two more exchanges may be carried out, each initiating a different CoD session, both of which are associated with the composition session. Specifically, the UE may initiate a first CoD session by exchanging the PSC_Session_ID with the MF1, this time in a CoD session initiation request and CoD session initiation response that also includes a CoD_session_ID1 (steps

210-214), and may initiate a second CoD session by once more exchanging the PSC_Session_ID with the MF2, this time in a CoD session initiation request and CoD session initiation response that also includes a CoD_session_ID2 (steps 216-218). *Id.* 11:31-58.¹

77. Together, the three associated sessions of Figure 2, each initiated by one or another of the illustrated exchanges, form a personalized multimedia service, such as a personalized TV experience, managed via the composition session.

78. For the protocol flow of Figure 2, each of the exchanges may include the PSC_Session_ID being sent between the UE and network element (SCF, MF1, or MF2).

79. Figure 3 of the '669 Patent, reproduced below, is an example data model of a composition session. *Id.* 11:59-63.

¹ Steps 212, 214, and 216 in Figure 2 appear to be inconsistently identified in the Detailed Description, although the meaning of these steps in both Figure 2 and the Detailed Description is clear.

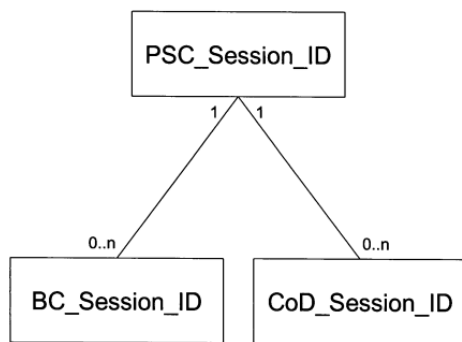


Figure 3

80. In Figure 3, the composition session is the PSC session, which may be empty or contain one or more BC sessions or one or more CoD sessions. *Id.* 11:63-65. Both the SCF and the UE “may keep track of the PSC session and which media sessions it contains.” *Id.* 11:61-63.

C. The Challenged Claims

1. Claims 2-9 and 13

81. Independent Claim 1 was cancelled as a result of IPR2022-00557. Claims 2, 4, 6, 8, and 13 depend from Claim 1 and, therefore, include the limitations of cancelled Claim 1.

82. Claim 1 recites:

[1pre] A method for managing associated sessions in a network, the network having a network element configured for managing associated sessions between the network and at least one user equipment, the method comprising:

[1a] providing a composition session identifier for associating sessions in the network;

[1b] after providing the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a first time;

[1c] associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time, wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with the user equipment;

[1d] initiating establishment of a composition session, the composition session being a signaling session for facilitating management of the two or more sessions and exchanging the composition session identifier between the user equipment and the network element as part of said establishment, the composition session being different from the two or more sessions; and

[1e] modifying the composition session, wherein modifying the composition session comprises using signaling in the composition session to terminate all of the two or more sessions.

EX1001, 16:38-63 (the Petition's notation of limitations added in brackets).

83. Figure 2 of the '669 Patent, reproduced again below with annotations added, illustrates one example protocol flow corresponding to exchanges of the "composition session identifier" between the "user equipment" and the "network element," and two "sessions" thereby initiated as recited in Claim 1. Specifically, the example protocol flow of Figure 2 illustrates at least portions of limitations

[1pre], [1b], [1c], and [1d]. As stated above, in Figure 2, the recited “composition session identifier” is represented by the “PSC_Session_ID.”²

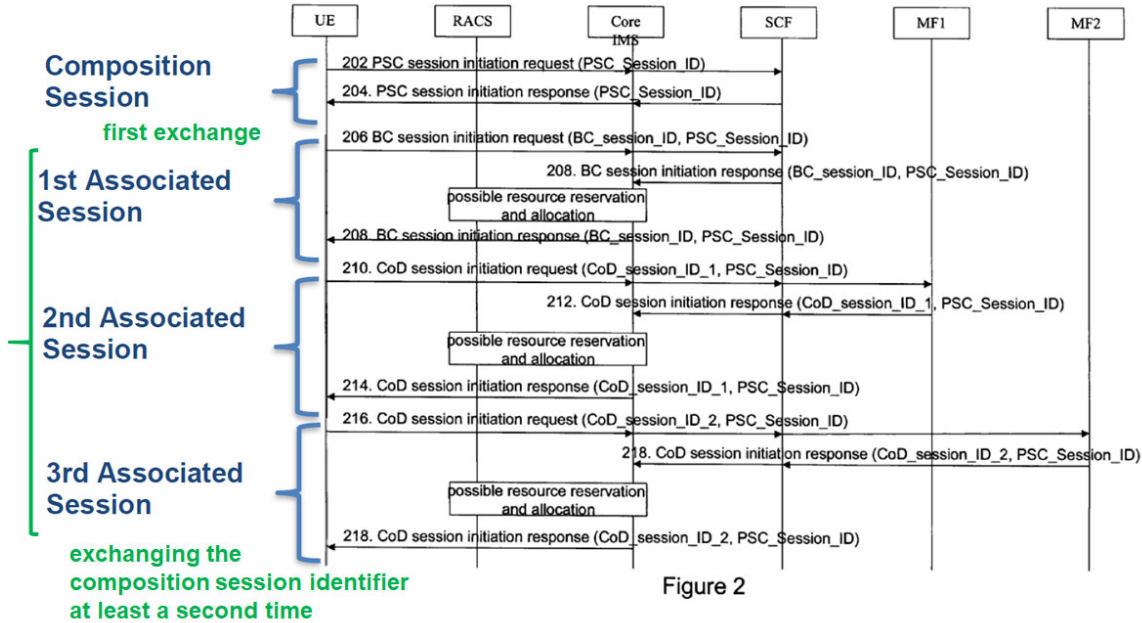


Figure 2

84. An example of limitations [1b] and [1d] (or portions thereof) are illustrated by the exchange of the PSC_Session_ID between the UE and the SCF in a PSC session initiation request and PSC session initiation response (steps 202-204). In particular, this exchange in Figure 2 represents “exchanging the composition session identifier between a user equipment and the network element a first time”

² The annotated version of Figure 2 includes annotations, in blue, presented in prosecution and cited in Ericsson’s Petition. *Ericsson*, IPR2022-00557, Paper 2, at 11. Additional annotations added to Figure 2, in green, are described below. Figure 2 does not necessarily include a protocol step for every limitation of Claim 1.

and “initiating establishment of a composition session . . . exchanging the composition session identifier between the user equipment and the network element as part of said establishment” as recited in limitation [1b] and [1d]. The annotation of Figure 2 indicates the “Composition Session” with an additional label of “first exchange.”

85. An example of limitation [1c] is illustrated by the three exchanges of the “PSC_Session_ID” between the UE and one or another of the SCF, MF1, or MF2. In Figure 2, these exchanges are depicted in steps 206-208, 210-214, and 216-218, respectively. Each one individually initiates a different multimedia session, which is associated “with the composition session identifier by exchanging the composition session identifier at least a second time” as recited in limitation [1c]. A further annotation of Figure 2 indicates the “1st Associated Session,” “2nd Associated Session,” and “3rd Associated Session,” with an additional common label of “exchanging the composition session identifier at least a second time.”

86. An example of limitation [1pre] is illustrated by all of the exchanges in Figure 2:

- the “associated sessions” recited in limitation [1pre] are the “two or more sessions” recited in limitation [1d], and
- “the composition session [that is] a signaling session for facilitating management of the two or more sessions” recited in limitation [1d] meets, at least in

part, the goal of the method recited in limitation [1pre], namely “for managing associated sessions in a network.”

87. Claim 3 depends from Claim 2, Claim 5 depends from Claim 4, Claim 7 depends from Claim 6, and Claim 9 depends from Claim 8.

2. *Claim 23*

88. Independent Claim 21 was cancelled as a result of IPR2022-00557. Claim 23 depends from Claim 21 and, therefore, includes the limitations of cancelled Claim 21.

89. Claim 21 recites the same limitations as Claim 1, except for the last limitation of Claim 21, which the Petition designates as [21e]. Limitation [21e] recites “modifying, using signaling in the composition session, all of the two more sessions,” whereas limitation [1e], recites “modifying the composition session, wherein modifying the composition session comprises using signaling in the composition session to terminate all of the two or more sessions.”

90. The Petition does not distinguish between Claims 1 and 21. Pet., 54 (stating for each of limitations [21a] through [21d] “*See* identical Limitations, 1pre-1d, respectively”); *id.* (stating for limitation [21e] “*See* Limitation 1e”).

3. *Claims 15-18 and 20*

91. Of Claims 15-18 and 20, Claim 15 is independent and the remainder are dependent.

92. Claim 15 recites:

[15pre] A system for managing associated sessions in a network,

the system comprising:

[15a] a network element; and

[15b] a user equipment,

[15c(i)] wherein the network element is configured to (i) manage sessions between the network element and the user equipment,

[15c(ii)] (ii) exchange a composition session identifier with the user equipment a first time, and

[15c(iii)] (iii) associate two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time, wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with either the user equipment or a second user equipment different from the user equipment,

[15d(i)] wherein the user equipment is configured to (i) provide the composition session identifier and

[15d(ii)] (ii) after providing the composition identifier, exchange the composition session identifier with the network element, and

[15e] at least one of the network element or the user equipment is configured to initiate a composition session, the composition session being a signaling session for facilitating management of the two or more sessions and exchanging the composition session identifier between the user equipment and the network element, the composition session being different from the two or more associated sessions, and

[15f] wherein the network element is configured to modify the composition session using signaling in the composition session to terminate all of the two or more sessions.

EX1001, 18:26-56 (the Petition's notation of the limitations added in brackets).

93. The Petition does not distinguish between Claim 1 and Claim 15. Pet., 46-48 (citing arguments for Claim 1 for Claim 15). However, Claim 15 and Claim 1 recite different limitations. For example, although Samsung refers to its arguments for limitation [1a] for limitation [15d(i)], Pet., 47, those limitations are not the same. Limitation [1a] recites "providing a composition session identifier for associating sessions in the network," whereas limitation [15d(i)] recites "the user equipment is configured to (i) provide the composition session identifier." EX1001, 16:42-43, 18:42-43. Limitation [15d(i)] is more similar to limitations in Claim 2 than limitation [1a].

D. ETSI TISPAN Adopted the Invention of the '669 Patent

94. The '669 Patent describes the example IPTV system as defined by ETSI TISPAN TS 182.027. EX1001, 6:66-67, Code 56.

95. The invention of the '669 Patent involved changes to the ETSI Technical Specifications. According to the '669 Patent, “[i]nitiation of the BC session may be realized by using adapted standard procedures as defined in ETSI TS 182 027 section 8.[3.1] and ETSI TS 183 063 section 5.3.1” and “[t]he adaptation of the standard procedures regards the inclusion of the initiation request of the PSC-ID of the PSC session of which the BC multimedia session is part.” *Id.* 11:10-15. Further, the '669 Patent discloses with respect to setting up a first CoD session that “[t]his may be done e.g. by using adapted standard procedures as defined in ETSI TS 182 027 section 8.4.1 and ETSI TS 183 063 section 5.3.2” and “[t]he adaptation of the standard procedures regards the inclusion in the CoD initiation request of the PSC-ID of the PSC session of which the CoD session is part.” *Id.* 11:31-36. The '669 Patent also discloses that “[i]n a similar manner a second CoD session is setup.” *Id.* 11:52.

96. The Ericsson's IPR Petition cited a Change Request, the Change Request, titled “WI20270_Procedure_for_Personal_Service_Composition” and numbered 19tTD080r4, dated after the priority date of the '669 Patent from KPN to update ETSI TISPAN TS 182 027. *Ericsson*, IPR2022-00557, Paper 2, at 8. I have resubmitted the Change Request in this IPR as EX2003.

97. Ericsson's expert in district court litigation against KPN, Dr. Kevin Jeffay, commented on KPN's Change Request, and KPN cited an excerpt of Dr. Jeffay's expert report in IPR2002-00557. I have resubmitted the excerpt of Dr. Jeffay's expert report in this IPR as EX2004.

98. Dr. Jeffay stated that KPN "submitted an ETSI TISPAN Change Request related to the invention claimed in the '669 Patent in January 2009, a few days after the alleged foreign priority date on the face of the '669 Patent" and that "this proposal was ultimately adopted in Section 8.22 Personalized Service Composition (PSC) procedures of ETSI TISPAN TS 182.027 'IPTV functions supported by the IMS subsystem' (version 3.1.3)." EX2004, at 5. He noted that "the next published version of TS 182.027 was version 3.5.1, which published in 2011." *Id.*

99. In IPR2022-00557, I opined that the Change Request to ETSI TISPAN TS 182.027 was evidence of industry praise that supported nonobviousness, and I understand that the Board found that this evidence supported the nonobviousness of Claim 2, 3, 6, and 8. *Ericsson*, IPR2022-00557, Paper 34, at 27-29.

100. Specifically, the Board in IPR2022-00557 found that:

- "Petitioner acknowledges, and Patent Owner emphasizes, that Patent Owner submitted a European Telecommunications Standards Institute (ETSI) Telecommunications Internet Converged Services and Protocols for Advanced

Networking (TISPAN) Change Request related to the embodiments recited in the '669 Patent”;

- “Patent Owner provides a showing that the Change Request ‘has nexus to and is reasonably commensurate with’ independent claims 1 and 21”; and
- “Separate aspects of the Change Request are reflected in the dependent claims, discussed below, and are more relevant in showing the nonobviousness of those claims.”

Id.

101. Neither Dr. Almeroth nor Samsung address the Board’s findings related to ETSI TISPAN’s adoption of KPN’s Change Request to ETSI TISPAN TS 182.027. EX1003 at 38-39 n.2; Pet., 12 n.2.

102. Further, KPN submitted a second Change Request to ETSI TISPAN TS 183.063 after the invention date of the '669 Patent. EX2009. The second Change Request was ultimately adopted by ETSI TISPAN in Section 5.1 and 5.3 Procedures using SIP/SDP for IMS-based IPTV of ETSI TISPAN TS 182.063 “IMS-based IPTV stage 3 specification” (version 3.4.2). EX2010.

VI. CLAIM CONSTRUCTION

103. Below are terms recited in the Challenged Claims that I understand that KPN has identified for construction.

A. “Associated Sessions”

104. I understand that in IPR2022-00557 the Board construed “associated sessions” to mean “sessions that should not be managed independent from each

other.” *Ericsson*, IPR2022-00557, Paper 34 at 8. The Board’s construction of “associated sessions” is consistent with the ’669 Patent’s definition of “associated sessions” as sessions that “should not be managed independent from each other.” EX1001, 7:37-38.

105. I agree with the Board’s construction of “associated sessions.” For purposes of this Declaration, I have employed the Board’s construction of “associated sessions” in my analysis.

106. That the Board construed “associated sessions” in IPR2022-0057 shows that the term “associated sessions” is a limitation of the Challenged Claims. *Ericsson*, IPR2022-00557, Paper 34 at 8.

107. Claims 1 and 21, which were cancelled as a result of IPR2022-00557, recited “associated sessions” in the preamble. Claims 2, 4, 6, 8, 13, and 23 depend from Claims 1 or 21 and, therefore, include this limitation. The term “associated sessions” gives life, meaning, and vitality to the rest of the claims in which it is recited, including the recitation of “associating two or more sessions” in Claims 1 and 21 and “providing a composition session identifier for associating sessions in the network” in Claims 1 and 21.

108. The connection between the terms “associated sessions” and “two or more sessions” is further shown by the recitation of “the two or more associated sessions” in Claims 6-10, 13, 15, and 18.

109. In all, the term “associated sessions” is referred to over 30 times in the ’669 Patent, including the title of the Patent: “Managing Associated Sessions.” The significance of “associated sessions” and what the term means in context of the ’669 Patent is clear, and it cannot be discounted in the analysis of the Challenged Claims.

B. “Composition Session”

110. I understand that in IPR2022-00557 the Board construed “composition session” to mean “a separate signaling session for managing the associated sessions that is initiated using a different signaling session than the associated sessions.” *Ericsson*, IPR2022-00557, Paper 34 at 8-9. For purposes of this Declaration, I have employed this construction of “composition session” in my analysis.³

C. “Exchanging the Composition Session Identifier”

111. I understand that in IPR2022-00557 the Board construed “exchanging the composition session identifier” to mean “sending the composition session identifier in either direction.” *Ericsson*, IPR2022-00557, Paper 34 at 10. For

³ In the district court litigation between Ericsson and KPN, the District Court construed “composition session” as “a signaling session that is separate from the associated sessions and that is for facilitating management of the associated sessions.” EX2005, at 90. As I stated in my Declaration in IPR2022-00557, I agree with the District Court’s construction of “composition session.” *Ericsson*, IPR2022-00557, EX2009 ¶96.

purposes of this Declaration, I have employed the Board's construction of "exchanging the composition session identifier" in my analysis.

D. Other Terms

112. For purposes of this Declaration, I believe each remaining term recited in the Challenged Claims can be given its ordinary and customary meaning, and that no express construction of these terms is needed to resolve the controversy.

VII. THE ALLEGED PRIOR ART

113. The Petition presents three proposed grounds of unpatentability against the Challenged Claims. Ground 1 alleges obviousness of Claims 2-6, 8, 14-18, and 20 over Widegren and Widegren-793; Ground 2 alleges obviousness of Claims 7 and 9 over Widegren, Widegren-793, and ETSI TS 183 063; and Ground 3 alleges obviousness of Claims 13 and 23 over Widegren, Widegren-793, and Astrom. Pet., 2.

A. Widegren

114. Widegren is a published U.S. patent application. EX1005. Widegren describes session-based control of a plurality of "media packet access bearers" that support a corresponding plurality of "media data streams" of a given "multimedia session." *Id.* [0198] ("Setting up a multimedia session . . . using the media binding information to associate each media data stream in the session to one of the media packet access bearers to provide session-based control of each of the media packet

access bearers.”). Media packet access bearers provide lower-layer support for the media streams. *Id.* [0018] (“A bearer is a logical connection between two entities through one or more interfaces, networks, gateways, etc., and usually corresponds to a data stream.”).

115. In Widegren, each media packet access bearer corresponds to the bearer between a user equipment (UE) and a Gateway General Packet Radio Service Node (GGSN), and it is established by a packet data protocol (PDP) context activation sent from the UE to the General Packet Radio Services (GPRS) network. *Id.* [0020], [0021], [0111]. A PDP context activation message includes a PDP context data, which provides parameters used to authorize the session or identify necessary resources. *Id.* [0111].

116. The UE first establishes a “session signaling GPRS bearer” for session signaling. *Id.* The UE establishes this session signaling GPRS bearer “using well-established GPRS PDP context activation messages.” *Id.* The GPRS bearer may, like “media packet access bearers,” be associated with a single media stream. *See id.* [0106], [0116]. In my opinion, the media packet access bearers must be set up before the actual media streams are initiated. *See id.* [0106] (“[E]ach media data stream in the session [can be associated with] one of the media access bearers used to transport each media data stream in the session”). That is, the media packet access bearers are established and made operational at layers below the media streams.

Therefore, the media packet access bearers support and are, thus, not themselves the media streams. *See id.* [0018] (“A bearer is a logical connection between two entities through one or more interfaces, networks, gateways, etc., and usually corresponds to a data stream.”). As an analogy, in Widegren, the media access bearers are like tunnels through which cars travel whereas the media streams are like streams of cars traveling through the tunnels. *See id.* [0107] (“Each media data stream or ‘flow’ is transported over a corresponding packet access bearer illustrated as a ‘transport of media flow’ pipe.”). Continuing this analogy, while particular streams of cars (media streams) can be associated with particular tunnels (media packet access bearers), cars should *never* be confused with tunnels.

117. To enable session level control of the media packet access bearers, Widegren describes “media binding information” (MBI) is created for each media data stream in a session. *Id.* [0112]. “The media binding information *associates* each media data stream in the session with one of the media packet access bearers and is used to provide session-based control of each of the media packet access bearers.” *Id.* Abstract (emphasis added). The MBI is included in the PDP context data. *Id.*

118. Widegren describes two methods for generating MBIs for inclusion in the PDP Context data. In the first method, MBIs for each media stream are directly generated in the network and included in the SDP for a session. *Id.* [0114], [0119],

[0122]. Thus, when a UE receives the SDP in a SIP INVITE, it can retrieve the MBIs and include them in the PDP Context Activation requests. The first method is illustrated in Widegren Figure 23, and a call flow for this method is illustrated in Figure 25. Widegren describes the MBI in the first method can be “local” or “global.” *Id.* [0122].

119. In the second method, the network generates a base “session identifier” or “authorization token” and includes it in the session SDP. *Id.* [0120], [0133]. When the UE and other network entities (e.g., PCF or GGSN) receive the session SDP, it generates an MBI for each stream by combining a stream identifier with the authorization token. *Id.* The generated MBIs can then be included in the PDP Context Activation requests. *Id.* [0112], [0114]. The second method is illustrated in Widegren Figure 24, and a call flow for this method is illustrated in Widegren Figure 26. The Petition repeatedly relies on Widegren Figure 26. *See, e.g., Pet.*, 25, 27, 37, 41, 44. Widegren Figure 26 is reproduced below.

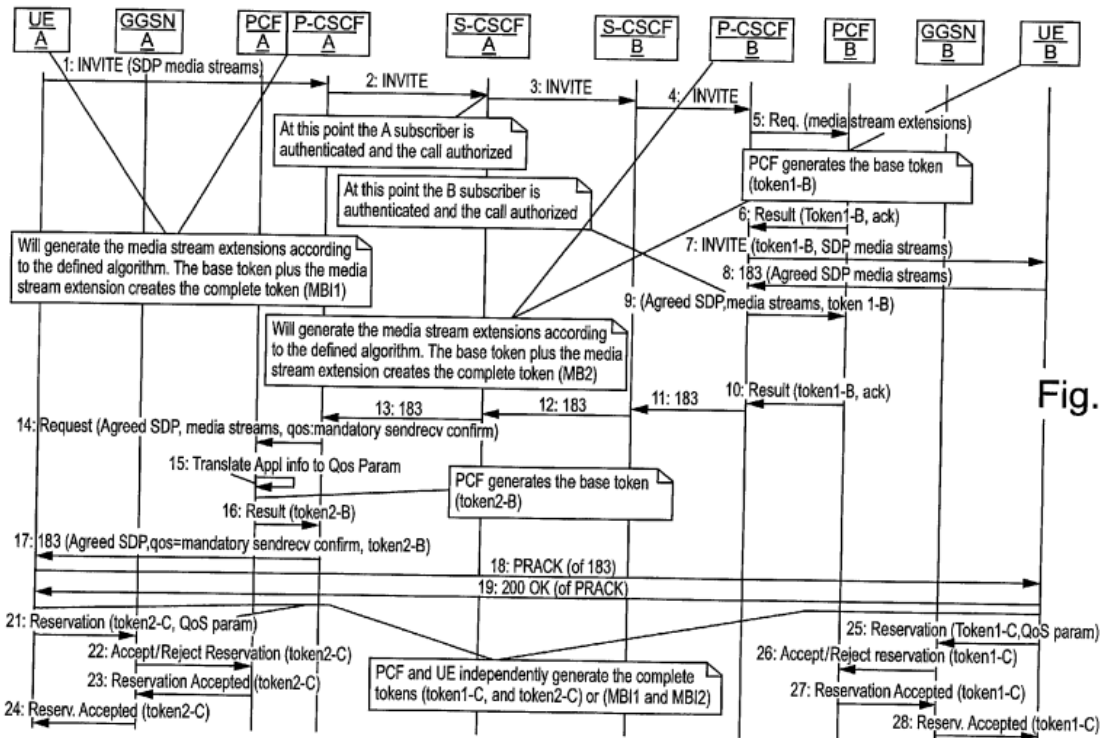


Fig. 26

EX1005, Fig. 26.

120. Widegren does not show establishing any media streams—only the media packet access bearers. In this regard, neither Figure 25 nor Figure 26 of Widegren include a SIP OK that is responsive to the initial SIP INVITE from UE-A. *Id.* Fig. 25, Fig. 26. Thus, Widegren does not show completion of the session setup. Further, in Widegren, there is only one SIP INVITE.

B. Widegren-793

121. Widegren-793 is a U.S. patent. EX1006. Widegren-793 describes “filtering and gating data in packet data networks using policy mechanisms.”

EX1006, 1:16-17. The Petition only relies on Widegren-793 only for limitation [1e] and dependent Claim 13. Pet., 33-34, 54, 66-68.

C. Astrom

122. Astrom is a published U.S. patent application. EX1007. Astrom describes “time-shifting and chase-play for an IPTV system.” EX1007, 3:4-5. The Petition only relies on Astrom in Ground 3 for dependent Claims 13 and 23. Pet., 2.

D. ETSI TS 183 063

123. ETSI TS 183 063 is an ETSI TISPAN standards document. EX1008. ETSI TS 183 063 describes procedures, functional entities, and call flows for protocols to support IPTV. EX1008, 10. For example, ETSI TS 183 063 describes SIP/SDP protocol and SIP signaling messages. *See, e.g.*, EX1008, at 14 (Figure 4.1), 15 (Table 4.1), 17, 20, 27, 28, 93-94. ETSI TS 183 063 “relies on the architectural framework defined in TS 182 027 for IMS-based IPTV Stage 2.” *Id.* 10 (endnote omitted). The Petition only relies on ETSI TS 183 063 in Ground 2 for dependent Claims 7 and 9. Pet., 2.

124. KPN submitted a second Change Request to ETSI TISPAN TS 183.063 after the invention date of the '669 Patent, which was adopted by ETSI TISPAN. *Supra* V.D.; *infra* XII.B.

125. The '669 Patent refers to ETSI TS 183 063. *Supra* V.D. (quoting EX1001, 11:10-15, 11:31-36). And ETSI TS 183 063 is cited on the face of the '669 Patent. *Id.* at 2, Code 56.

126. The '669 Patent cites three other ESTI TISPAN standards and an Open Mobile Alliance (OMA) Service Guide:

- ETSI-TS182-027 Technical Specification; “Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); IPTV Architecture; IPTV Functions Supported by the IMS Subsystem,” European Telecommunications Standards Institute, dated February 2008, 57 pages;
- ETSI-TS182-028 Technical Specification; “Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); IPTV Architecture; Dedicated Subsystem for IPTV Functions,” European Telecommunications Standards Institute, dated January 2008, 38 pages;
- ETSI-TS183-064 Technical Specification; “Telecommunications and Internet Converged Services and Protocols for Advanced Networking; Dedicated IPTV Subsystem Stage 3 Specification,” European Telecommunications Standards Institute, dated October 2008, 46 pages; and

- “Service Guide for Mobile Broadcast Services,” Open Mobile Alliance, OMA-TS-BCAST-Service-Guide-V1-1-2008-07-07-D, Copyright 2008, Open Mobile Alliance Ltd., 213 pages.

Id.

VIII. SUMMARY OF MY OPINIONS

127. Having reviewed the '669 Patent and prior art cited above, I have formed the following opinions:

- Claims 2-6, 8, 15-18, and 20 are patentable over Widegren and Widegren-793;
- Claims 7 and 9 are patentable over Widegren, Widegren-793, and ETSI TS 183 063;
- Claims 13 and 23 are patentable over Widegren, Widegren-793, and Astrom; and
- Samsung has not proven by a preponderance of the evidence that any of Claims 2-9, 13, 15-18, 20, and 23 is rendered obvious by any of Widegren, Widegren-793, ETSI TS 183 063, and Astrom.

128. The reasons for my opinions are discussed below.

IX. GROUND 1: WIDEGREN AND WIDEGREN-793 DO NOT RENDER OBVIOUS CLAIMS 2-6, 8, 15-18, AND 20

A. Widegren and Widegren-793 do not teach Claims 2-6 and 8

129. In my opinion, Claims 2-6 and 8 are patentable over Widegren and Widegren-793. Aside from limitation [1e], Dr. Almeroth only relies on Widegren for Claims 2-6 and 8. *See* EX1003 ¶¶103-119. Widegren-793 is only cited by Dr. Almeroth for limitation [1e] and Claim 13. EX1003 ¶¶99-102.

130. The Board already adjudicated the patentability of Claims 2, 3, 6, and 8 in IPR2022-00557 and found that these claims were patentable. *Ericsson*, IPR2022-00557, Paper 34, at 60. In my opinion, the Board’s judgment in IPR2022-00557 supports the patentability of the Challenged Claims.

1. *Claim 2: Widegren does not teach or suggest “wherein providing the composition identifier comprises: the user equipment generating the composition session identifier; and sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier”*

131. Claim 2 depends from Claim 1 and adds the limitations “wherein providing the composition identifier comprises: the user equipment generating the composition session identifier [2a]; and sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier [2b].”

132. I understand that in district court litigation between Ericsson and KPN, Ericsson argued that Claim 2 was indefinite and that the District Court rejected that argument. EX2005, at 92-95. I also understand that the District Court construed “‘wherein providing the composition session identifier comprises . . . sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier’ to have its plain meaning.” *Id.* at 95 (emphases omitted).

133. Limitation [1a] recites “providing a composition session identifier for associating sessions in the network,” limitation [1b] recites “after providing the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a first time,” and Claim 2 recites, in part, “wherein the providing the composition identifier comprises: the user equipment generating the composition session identifier; and sending a request for initiating the composition session identifier from the user equipment to the network element, the request comprising the composition session identifier.” Further, limitation [1c] recites, in part, “wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with the user equipment.” Widegren does not teach or suggest this arrangement.

(a) Widegren does not teach or suggest [2a]

134. Dr. Almeroth asserts that the session identifier (also called authorization token) in Widegren is the “composition session identifier” recited in Claim 2. EX1003 ¶103. Limitation [2a] recites “the user equipment generating the composition session identifier.” But Widegren does not teach or suggest this arrangement.

135. Paragraph [0186] of Widegren, cited by Dr. Almeroth, teaches that the session identifier/authorization token is generated at the Policy Control Function (PCF), which is a network element, and not at the user equipment. EX1003 ¶103 (citing EX1005 [0186] (“A session ID/authorization token is received from SIP signaling, (e.g., generated at the PCF and stored at the P-CSCF), at session level/SIP entities in the network and at the mobile terminal.”)).

136. Other portions of Widegren confirm that the session identifier/authorization token is generated at the PCF. *See, e.g., id.* [0111] (“[T]he Policy Control Function 100 generates an authorization ‘token’ for the session (session identifier) and sends it to UE-A and UE-B (block 115). The multimedia session is authorized, and the policy control function 100 stores session information for each of the media flows in the session.”); *id.* [0185] (“A SIP session identifier (sometimes called an authorization token) is determined for the multimedia session, (e.g., generated at the PCF and stored at the P-CSCF.”). There is no teaching or

suggestion in Widegren of the user equipment (UE) generating the session identifier/authorization token.

137. Despite this, Dr. Almeroth asserts that “[i]t would have been obvious to a POSITA to generate the session identifier (*composition session identifier*) at the user equipment because that is one of a limited number of predictable options as to where the session identifier can be generated.” EX1003 ¶104 (emphasis in original). According to Dr. Almeroth, this is “a straightforward design choice.” *Id.* ¶105. I disagree with Dr. Almeroth for at least three reasons.

138. First, Dr. Almeroth’s assertion that the UE is “one of a limited number of predictable options as to where the session identifier can be generated,” *id.* ¶104, is mistaken. There are many choices for an element to generate the composition session identifier, e.g., the user equipment, multiple different network elements (e.g., PCF and GGSN), and elements outside of the network. Dr. Almeroth has provided no evidence to suggest that the result of generating the composition session identifier at another location is predictable. Moreover, the Petition’s detailed annotations of Figures 19 and 26 of Widegren are inconsistent with Dr. Almeroth’s position that it would have been “a straightforward design choice” (*id.* ¶105) for the UE in Widegren to generate the session identifier/authorization token.

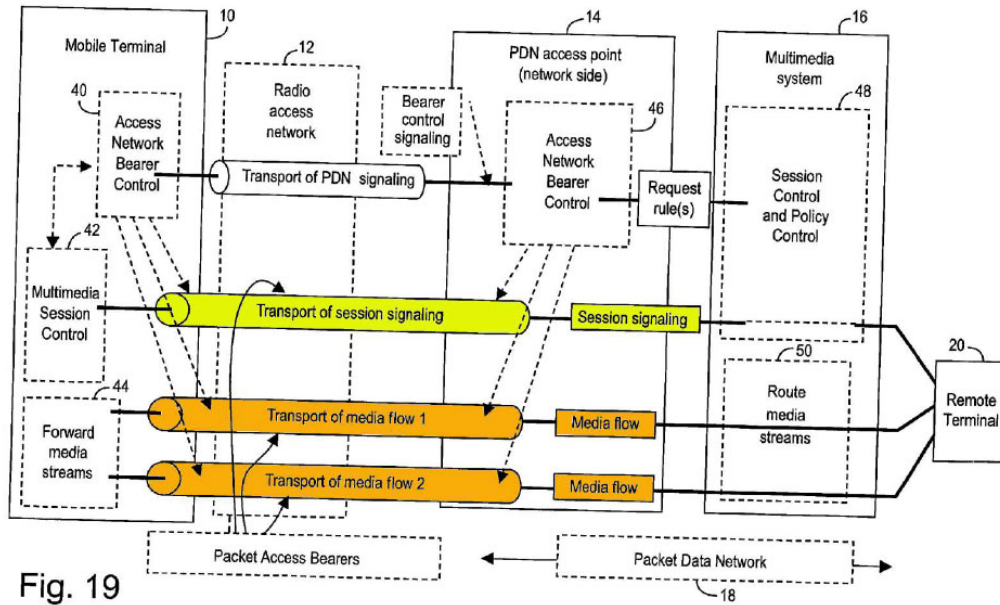


Fig. 19

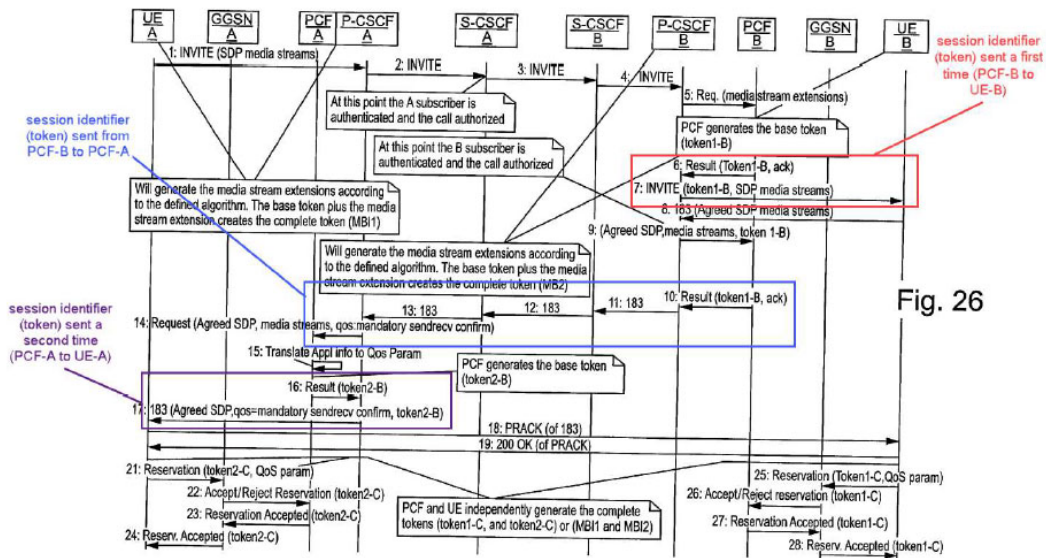


Fig. 26

Pet., 23, 25.

139. Further, there are advantages to limitation [2a]'s recitation of "the user equipment generating the composition identifier." Claim 2 allows the UE to set up the composition session and the media sessions in parallel, which allows all of the

sessions to be set up in a shorter amount of time than if the network generated the composition session identifier. By contrast, in Figure 25 of Widegren, the system or user would need to wait until message 21 to start a session. EX1005 [0187]-[0191], Fig. 25.

140. Second, for limitation [1b], Dr. Almeroth relies on a global session identifier, which he explains is generated remotely. EX1003 ¶90 (“Widegren discloses that the session identifier may be generated ‘locally’ (i.e., a different session identifier for each network element in a particular session) or ‘globally’ or ‘remotely’ (i.e., the same session identifier for all network elements in a particular session). EX1005 [0122]. In other words, if a global session identifier is used, then the same composition session identifier would be sent (i.e., *exchanged*) to all of the UEs in a particular multimedia session.” (emphasis in original)). Dr. Almeroth relies on a global session identifier for limitation [1b] because local tokens—token1-B sent from PCF-B to UE-B via PCSF-B and token2-B sent from PCF-A to UE-A via PCFSF-A—are different. EX1005 [0193], [0194], Fig. 26. Different tokens on the A and B sides do not map to exchanging the “composition session identifier” recited in limitations [1b] and [1c].⁴

⁴ Widegren paragraph [0122] states that a “global MBI could be generated” and used at both A and B sides, but Widegren does not disclose how the global MBI is generated.

141. Further, Dr. Almeroth's reliance on a global session identifier for limitation [1b] undermines his arguments for limitation [2a] because Dr. Almeroth jumps from a remotely generated session identifier in limitation [1b] to a UE generated session identifier in Claim 2. *Compare* EX1003 ¶¶90, *with id.* ¶¶104-105. This ignores the antecedent basis of the Claim 1 limitations recited in Claim 2.

142. Third, Dr. Almeroth's proposed modification of Widegren's UE generating the session identifier/authorization token is nonsensical, in that it opposes the fundamental purpose of Widegren. Namely, in Widegren, the network controls and authorizes the resources for the multimedia sessions. *See, e.g.*, EX1005 [0111] ("The Policy Control Function 100 authorizes, if appropriate, the required quality of service resources for the session and installs an IP bearer level policy for the session and each media flow"); *id.* [0189] ("The proxy-CSCF-A forwards the INVITE message to UE-A's serving-CSCF-A which authenticates UE-A and authorizes the multimedia call."). In my opinion, Widegren's session-based control of media packet access bearers would not work if resource policy decisions were made by the UEs. Specifically, it makes no sense for and nothing in Widegren suggests that the UEs, the elements required to ask for authorization, be able to give themselves that requested authorization.

143. Because authorization by the network of services requested by UEs is a principle of operation of Widegren's teachings, Dr. Almeroth's proposed

modification of Widegren would change a principle of operation of Widegren by the UEs asking for authorization to give themselves that authorization.

144. Despite this, Dr. Almeroth asserts that “when multiple, different media access bearers are used, it makes more sense for the UE to generate the composition session identifier.” EX1003 ¶105. But Dr. Almeroth does not provide any reason why a POSITA would have modified Widegren so that the UE generates the session identifier/authorization token. Instead, Dr. Almeroth asserts that the alleged design choice “could have been implemented by a POSITA with predictable results.” *Id.* The only predictable result of Dr. Almeroth’s proposed modification of Widegren would be to undermine the principle of network authorization that is fundamental to Widegren’s teachings. Further, Dr. Almeroth’s reliance on “could have been implemented” is telling because what *could* have been done is not the test for obviousness. For Ground 1, Samsung must prove by a preponderance of evidence that a POSITA *would* have modified Widegren to achieve Claim 2. Samsung has not done so.

145. For these reasons, Widegren does not teach or suggest “providing the composition identifier comprises: the user equipment generating the composition session identifier” recited in limitation [2a].

(b) Widegren does not teach or suggest [2b]

146. Dr. Almeroth cites Widegren Figure 26 and alleges that the SIP INVITE from UE-A (step 1 in Fig. 26) is “sending a request for initiating the composition session from the user equipment to the network” recited in limitation [2b]. EX1003 ¶107.

147. Dr. Almeroth then makes an inherency argument for “the request comprising the composition identifier” recited in limitation [2b]. *See id.* ¶108. In this regard, he asserts that “if the session identifier is generated at the user equipment, then the session identifier *would have* to be provided to the other SIP entities in the network as part of the multimedia session initiation request,” and “[t]hat is *necessarily true* because subsequent steps of the multimedia session initiation process, include, for example, storing the session identifier at the P-CSCF.” *Id.* (emphases added). I disagree with Dr. Almeroth.

148. Even adopting, *arguendo*, the session identifier being generated at the UE, it is not inherent in Widegren that the UE would have to send the session identifier to a network element as part of the multimedia session initiation request (i.e., in the SIP INVITE). That is, it does not follow that a session identifier hypothetically generated at the UE in Widegren must necessarily be sent as part of a multimedia session initiation request. Positing a possibility or even probability

that this would occur in Widegren is not enough for Dr. Almeroth's inherency argument.

149. Indeed, there are other ways that the session identifier may be provided to other SIP entities in the network. For example, the UE could use the SIP INFO message for carrying the session identifier to a network element. *See* EX2006. The SIP INFO message follows the existing SIP routing, so the UE could use the SIP INFO message to send the session identifier to wherever the SIP INVITE could go. *See id.* at 3 (“The signaling path for the INFO method is the signaling path established as a result of the call setup.”). Consequently, the SIP INFO message would achieve sending the session identifier to a network element in a way that does not map to Claim 2.

150. For these reasons, Widegren does not teach or suggest “sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier” recited in limitation [2b].

2. *Claim 3: Widegren does not teach or suggest “wherein the request for initiating the composition session further comprises one or more session identifiers and, optionally, resource reservation information and/or resource allocation information associated with the one or more sessions identified by the session identifiers”*

151. Claim 3 depends from Claim 2 and adds the limitation “wherein the request for initiating the composition session further comprises one or more session

identifiers and, optionally, resource reservation information and/or resource allocation information associated with the one or more sessions identified by the session identifiers.”

152. Claim 3 is patentable over Widegren and Widegren-793 for at least the same reasons that Claim 2 is patentable over Widegren and Widegren-793. *Supra* IX.A.1.; *infra* IX.A.5. (limitations of Claim 1). In my opinion, Claim 3 is patentable over Widegren and Widegren-793 for two additional reasons.

153. First, Dr. Almeroth alleges that “‘session signaling’ for initiating the multimedia session” in Widegren is the “the request for initiating the composition session” recited in Claim 3. EX1003 ¶109. I disagree with Dr. Almeroth.

154. Dr. Almeroth’s mapping of “the ‘session signaling’ for initiating the multimedia session” in Widegren to “the request for initiating the composition session” recited in Claim 3 is not consistent with Claim 3’s dependency on Claim 2.

155. Claim 2 recites “sending a request for initiating the composition session . . . the request comprising the composition session identifier.” Because Claim 3 depends from Claim 2, “the request for initiating the composition session” recited in Claim 3 includes the “composition session identifier” recited in Claim 2. Dr. Almeroth alleged that the authorization token is the “composition session identifier.” *Supra* IX.A.1.(a). But Widegren’s “‘session signaling’ for initiating the multimedia session” that Dr. Almeroth cites for “the request for initiating the composition

session” recited in Claim 3 is a multimedia session request from UE-A. EX1003 ¶109. According to Widegren, this request cannot include the authorization token, as it is used as a basis to create the authorization token. *See* EX1005 [0111] (“This request . . . contains sufficient information about the session . . . to trigger an authorization of QoS resources procedure in the Proxy-Call State Control Function 98.”). Thus, Dr. Almeroth’s reliance on the authorization token for Claim 2 undermines his arguments for the “request for initiating the composition session” recited in Claim 3.

156. Second, Dr. Almeroth alleges that “Widegren discloses that the multimedia session initiation request includes at least *resource allocation information associated with the one or more sessions identified by the session identifiers.*” EX1003 ¶110 (emphases in original). Accordingly, Dr. Almeroth maps “resource allocation information associated with the one or more sessions identified by the session identifiers” to the “resource reservation information and/or resource allocation information” recited in Claim 3. I disagree with Dr. Almeroth.

157. The multimedia session request identified by Dr. Almeroth is sent from the UE to the PCF *before* the authorization token has been generated by the network because the PCF generates the authorization token *based on* the multimedia session request. EX1005 [0111]. Accordingly, the multimedia session initiation request identified by Dr. Almeroth cannot include both the authorization token (which Dr.

Almeroth alleges is the “composition session identifier”) and the “resource allocation information associated with the one or more sessions identified by the session identifiers” (which Dr. Almeroth alleges is the “resource reservation information and/or resource allocation information”).

158. For these reasons, Widegren does not teach or suggest “wherein the request for initiating the composition session further comprises one or more session identifiers and, optionally, resource reservation information and/or resource allocation information associated with the one or more sessions identified by the session identifiers” recited in Claim 3.

3. *Claim 6: Widegren does not teach or suggest “wherein the method further comprises: the user equipment initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element, each request comprising the composition session identifier”*

159. Claim 6 depends from Claim 1 and adds the limitation “wherein the method further comprises: the user equipment initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element, each request comprising the composition session identifier.”

160. Dr. Almeroth alleges that media streams in Widegren are “the two or more associated sessions” recited in Claim 6, and that the “PDP context activation/creation requests” in Widegren are the “two or more session initiation

requests for a session” recited in Claim 6. EX1003 ¶115. I disagree with Dr. Almeroth.

161. Even adopting, *arguendo*, Dr. Almeroth’s allegation that the media streams in Widegren are “the two or more associated sessions” recited in Claim 6 (which is incorrect as discussed *infra* IX.A.4.), Dr. Almeroth’s mapping of Claim 6 is still incorrect because the PDP context activation requests in Widegren do not initiate any media streams. *Supra* ¶116 (citing EX1005 [0018]). To the contrary, the PDP context activation requests only create a tunnel, but they do not create the media that flows through this tunnel. *See id.* Instead, in Widegren, the media streams are created by the SDP in the SIP INVITE. EX1005, [123] (“The SIP INVITE message used to set up a multimedia session includes SDP that describes the media for the session.”). But Dr. Almeroth does not allege any SIP INVITEs are “the two more session initiation requests for a session” recited in Claim 6. *See* EX1003 ¶115. Widegren describes only one SIP INVITE. *Supra* ¶120.

162. Thus, Dr. Almeroth’s mapping of Claim 6 is inconsistent: Widegren does not teach or suggest the relationship between the media streams (the alleged “two or more associated sessions”) and the PDP context/activation requests (the alleged “two or more session initiation requests for a session”) as recited in Claim 6: “initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element.”

163. This inconsistency is further revealed through Dr. Almeroth's annotated Figure 19 of Widegren in which he marks in orange both "Transport of" and the "Media flow":

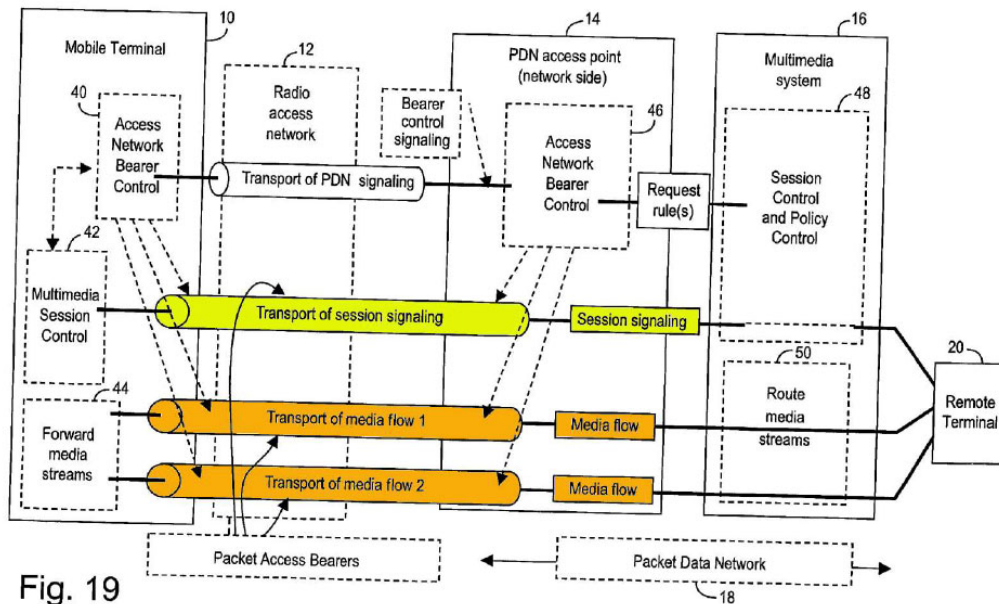


Fig. 19

EX1003 ¶114. Dr. Almeroth's annotation of Figure 19 is incorrect. In Figure 19, the transport and media flow are initiated by different signaling. *See* EX1005 [0107] ("Over this bearer, the mobile terminal 10 initiates a multimedia session including a plurality of media data streams with the remote terminal 20.").

164. For at least these reasons, Widegren does not teach or suggest "wherein the method further comprises: the user equipment initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element, each request comprising the composition session identifier" recited in Claim 6.

4. *Claim 8: Widegren does not teach or suggest “wherein the method further comprises: the network element initiating the two or more associated sessions by sending two or more requests for a session to the user equipment, each request comprising the composition session identifier”*

165. Claim 8 depends from Claim 1 and adds the limitation “wherein the method further comprises: the network element initiating the two or more associated sessions by sending two or more requests for a session to the user equipment, each request comprising the composition session identifier.”

166. Similar to Claim 6, Dr. Almeroth alleges that the “PDP context activation/creation requests” in Widegren are “two or more requests for a session” recited in Claim 8. EX1003 ¶118. For similar reasons discussed above with respect to Claim 6, the PDP context activation/creation requests are not “two or more requests for a session” recited in Claim 8. *Supra* IX.A.3. But even adopting, *arguendo*, Dr. Almeroth’s allegation that the PDP context activation/creation requests in Widegren are the “two or more requests for a session,” Claim 8 recites “the network element initiating the two or more associate sessions by sending two or more requests for a session to the user equipment,” and Widegren does not teach or suggest this arrangement.

167. Paragraph [0194] of Widegren, cited by Dr. Almeroth, teaches that the PDP context activation/creation is sent from the UE to a network element, the PCF. EX1003 ¶115 (citing EX1005 [0194]). In this regard, citing Widegren paragraph

[0194], Dr. Almeroth asserts that “Widegren further discloses that each of the media streams may be initiated by a separate *request* sent from the *user equipment* to the GGSN and PCF of the multimedia stream (*network element*)” and that “[t]he reservation procedure uses the media binding information to preform ‘PDP context/activation creation’ (*session initiation request*), which initiates each media stream.” EX1003 ¶115 (emphases in original).

168. Despite this, Dr. Almeroth asserts that “it would have been obvious to a POSITA to generate the requests at the network element and send them to the user equipment because it is one of two predictable options for initiating a session (*i.e.*, network element sends request to user equipment, or user equipment sends a request to the network element)” and “all would have been well within the skill of a POSITA, and could have been implemented by a POSITA with predictable results.” EX1003 ¶119. According to Dr. Almeroth, this is “a simple design choice.” *Id.* I disagree with Dr. Almeroth.

169. Dr. Almeroth does not provide any reason why a POSITA would have modified Widegren so that the network element sends the PDP context/activation to the UE. Dr. Almeroth’s reliance on “could have been implemented by a POSITA,” EX1003 ¶119, is again telling because that is not the test for obviousness. For Ground 1, Samsung must prove by a preponderance of evidence that a POSITA *would* have modified Widegren to achieve Claim 8. Samsung has not done so.

170. For these reasons, Widegren does not teach or suggest “wherein the method further comprises: the network element initiating the two or more associated sessions by sending two or more requests for a session to the user equipment, each request comprising the composition session identifier” recited in Claim 8.

5. *Widegren does not teach Claim 1 limitations, which are recited in each of Claims 2, 4, 6, and 8*

171. Claims 2, 4, 6, and 8 depend from Claim 1 and thus include all limitations of Claim 1. *Supra* IX.A.1-3. Widegren fails to teach or suggest multiple limitations of Claim 1, which also supports the patentability of Claims 2, 4, 6, and 8, and the claims that depend from these claims.

(a) A POSITA would not have considered Widegren’s media streams to be “sessions” recited in Claim 1

172. Dr. Almeroth alleges that the “plural media data streams” of Widegren are the “associated sessions” recited in [1pre]. EX1003 ¶79. He also relies on Widegren’s media streams for the “sessions” recited in [1a], [1c], [1d], and [1e]. *Id.* ¶¶86, 92, 94, 99. I disagree with Dr. Almeroth.

173. Widegren distinguishes between a multimedia session and one or more media data streams in the session. *Supra* IX.A.4. (demonstrating the Widegren’s media streams are not initiated using PDP context activation requests). For example, Widegren paragraph [0067] illustrates the distinction in Widegren between a media stream and a session: “[t]he present invention overcomes these and other problems

by providing an efficient and effective mechanism for binding packet access/bearers in the UMTS to the *multimedia streams* in *a session* they support to permit session level control of those bearers.” EX1005 [0067] (emphases added).

174. As other examples, Widegren paragraphs [0063] and [0121] also illustrate the distinction in Widegren between media stream and a session. *Id.* [0063] (“SIP is signaling protocol to establish sessions, and SDP is a text-based syntax to *describe the session* and includes, for example, the definition of *each media stream in the session.*” (emphases added); *id.* [0121] (“As *a media stream* is added or deleted from *a session*, the new stream is provided the next number in the series, and numbers are not reallocated.” (emphases added)).

175. In IPR2022-00557, the Board rejected Ericsson’s argument that “there is no difference between a media stream and an RTSP session,” and credited my testimony over the testimony of Ericsson’s expert, Mr. Wechselberger:

As Mr. Bates has testified, ‘adding a media stream is not the same as adding an RTSP session because a single RTSP session may be associated with multiple media streams by virtue of their inclusion in the session description (SDP).’ Ex. 2009 ¶ 218 (citing Ex. 1008, 22). We are not persuaded by Mr. Wechselberger’s responsive testimony that ‘[t]his a distinction without a difference’ (Ex. 1026 ¶ 79), because we agree with Patent Owner it does not appear to be supported by any evidence in the record. PO Sur-reply 8.

Ericsson, IPR2022-00557, Paper 34, at 32.

176. In support of my opinion in IPR2022-00557, I cited the Session Description Protocol (SDP) standard, RFC 4566. *Ericsson*, IPR2022-00557, EX1008. Widegren describes the SDP standard. *See, e.g.*, EX1005 [0063], [0070].

177. Dr. Almeroth's citation of the '669 Patent to argue that Widegren's media streams are the "sessions" recited in [1pre], [1a], [1c], [1d], and [1e] is inapt. EX1003 ¶80 (citing EX1001, 1:55-63, 2:47-53, 8:59-9:8). To read the '669 Patent into Widegren, as Dr. Almeroth proposes, would improperly read the '669 Patent into the prior art with hindsight.

178. For these reasons, a POSITA would not consider Widegren's media streams to be the "sessions" recited in Claim 1.

(b) Widegren does not teach or suggest "managing associated sessions" recited in [1pre]

179. Dr. Almeroth alleges that "session level control" in paragraph [0067] of Widegren is the same as the "managing associated sessions" recited in [1pre]. EX1003 ¶79. I disagree with Dr. Almeroth.

180. Widegren paragraph [0067] states: "[t]he present invention overcomes these and other problems by providing an efficient and effective mechanism for binding packet access/bearers in the UMTS to the multimedia streams in a session they support to permit *session level control of those bearers*, e.g., requesting, reserving, supplying, and enforcing IP level resources needed to support the

session.” EX1005 [0067] (emphasis added). Widegren teaches a bearer “usually corresponds to a data stream.” *Id.* [0018].

181. Widegren teaches control of bearers individually and not “managing associated sessions” recited in [1pre]. For example, Widegren teaches that “[t]he media binding information associates each media data stream in the session to one of the media packet access bearers and is used to provide session-based control of each of the media packet access bearers.” *Id.* Abstract; *see also id.* Fig. 24 (“Use MBI to provide session-based control of each media PAB”).

182. The “session level control” in Widegren paragraph [0067] applies at most to control of media streams in a single multimedia session. EX1005 [0067] (“[N]etwork operators can then identify the multimedia session and apply policy control to each of the media PDP contexts/media streams/packet access bearers in the session”). As discussed above, Widegren distinguishes between a multimedia session and one or more media data streams in the session. *Supra* IX.A.5.(a). Thus, Widegren does not consider individual “streams” to be individual “sessions.” Indeed, the term “session” appears 310 times in Widegren, but never to describe a media stream or flow. *See* EX1005.

183. At most, Widegren involves control of media streams individually, which is in contrast to the Board’s construction of the word, “associated,” in “associated sessions” in IPR2022-00557. Namely, the Board construed the so-

identified “more than one media streams” as streams that “should not be managed independent from each other.” *Supra* VI.A. Widegren itself emphasizes this distinction, stating that “[t]he present invention provides different mechanisms to control the media GPRS bearers *individually* on a per media stream basis.” EX1005 [0197] (emphasis added).

184. For these reasons, Widegren does not teach or suggest “managing associated sessions” recited in limitation [1pre].

(c) Widegren does not teach or suggest “associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time” recited in [1c]

185. Dr. Almeroth alleges that “Widegren discloses that the session identifier/authorization token (*composition session identifier*) is sent (i.e., *exchanged*) both *from the network element to the UEs*, and *from the UEs to the network element*.” EX1003 ¶89 (emphases in original.) As such (and as discussed above), Dr. Almeroth equates the authorization token in Widegren with the “composition session identifier” recited in Claim 1. Dr. Almeroth then cites to Figure 26 in Widegren to allege that Widegren teaches “exchanging the composition session identifier” recited in limitations [1b] and [1c]. I disagree with Dr. Almeroth’s allegations.

186. First, in connection with limitation [1b], Dr. Almeroth annotates Figure 26 of Widegren and alleges that steps 6-7 in the red box is the first exchange of the “composition session identifier” recited in limitation [1b] (authorization token, alleged by Dr. Almeroth), and that steps 16-17 in the purple box is a second exchange of the “composition session identifier.” EX1003 ¶¶90. In this regard, Dr. Almeroth relies on Widegren’s disclosure of a possible global authorization token, and asserts that steps 6-7 involve PCF-B sending the global authorization token to UE-B, and that steps 16-17 involve PCF-A sending the global authorization token to UE-A. *Id.* ¶¶90, 93.⁵ Dr. Almeroth then opines that “[a]ny of these exchanges [steps 6-7 or 16-17] could be the *first exchange*.” *Id.* ¶90 (emphasis in original).

⁵ As noted above, Dr. Almeroth’s reliance of a global authorization token in limitation [1b] undermines his arguments for limitation [2a]. *Supra* IX.A.1.

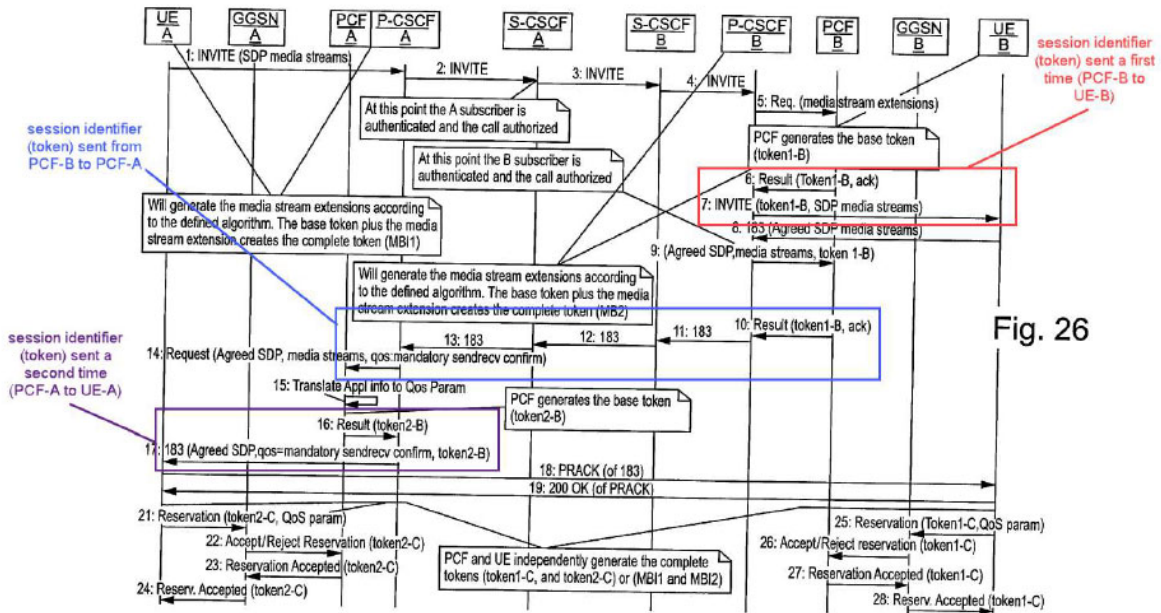


Fig. 26

EX1003 ¶90 (annotating EX1005 Fig. 26). I disagree with Dr. Almeroth that this arrangement teaches or suggests limitation [1c].

187. Subsequently, Dr. Almeroth annotates Widegren Figure 26 a further time and alleges that steps 21-24 in the purple box is the first exchange of the “composition session identifier” recited in limitation [1b] and that steps 25-28 in the blue box correspond to “each UE [sending] (i.e., [exchanging]) the *composition session identifier to the network elements* multiple times, once for each media stream.” *Id.* ¶91. In this context, Dr. Almeroth opines that “[a]ny of these exchanges”—now steps 21-24 or 25-28 instead of 6-7 or 16-17—“could be the *first exchange.*” *Id.* (emphasis in original).

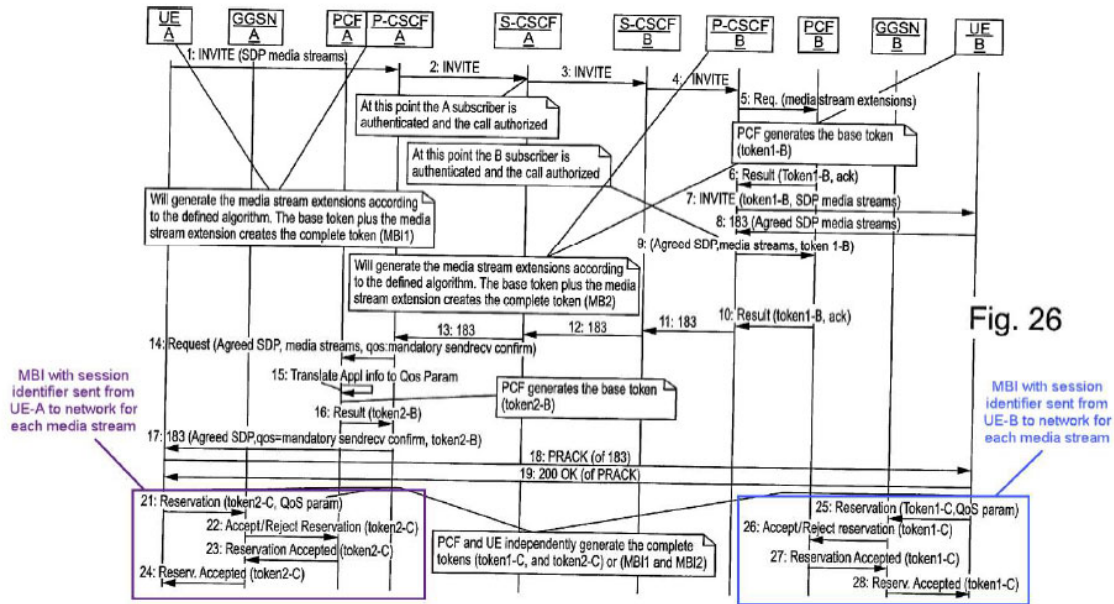


Fig. 26

EX1003 ¶91 (annotating EX1005 Fig. 26). I also disagree with Dr. Almeroth that this arrangement teaches or suggests limitation [1c].

188. Dr. Almeroth appears to have compiled a mixed bag of alleged “exchanges” in Widegren that—in some combination Dr. Almeroth does not explain—can be made to correspond to the first and (at least) second exchanges of the “composition identifier” recited in Claim 1. As explained below, however, no mapping of Dr. Almeroth’s alleged “exchanges” in Widegren leads to limitation [1c].

189. In connection with limitation [1c], Dr. Almeroth asserts that steps 21-24 in Figure 26 involve UE-A sending the global authorization token to GGSN-A, and that steps 25-28 involve UE-B sending the global authorization token to GGSN-B. *Id.* ¶93. Adopting, *arguendo*, Dr. Almeroth’s allegations that the global

authorization token is the “composition session identifier” recited in limitation [1c] and media streams are the “two or more sessions” recited in limitation [1c], Widegren does not teach or suggest associating two media streams by exchanging the global authorization token a second time.

190. Instead, Widegren teaches associating media streams in a multimedia session with respective media packet access bearers by combining the authorization token with a “media stream identifier” for each stream to generate “media binding information” or an “MBI” for each stream. EX1005, Abstract; *see also id.* [0194]. In other words, in Widegren, associating of two or more media streams—alleged by Dr. Almeroth to correspond to associated sessions in claim 1—with the authorization token is achieved by generating the MBI. In the last steps of Figure 26, steps 21-28, the MBIs (“token-1-C and token-2-C”) are generated in each domain (A and B) by the two UEs and the two PCFs. EX1005 [0194]. The MBIs are then used in the “Reservation” messages, which correspond to the PDP Context Activation requests. *Id.*

191. I disagree with Dr. Almeroth’s assertion that in Widegren, the UE sends an MBI to the PCF “as a reservation signal that associates that media stream with the multimedia session.” EX1003 ¶93. While steps 21 and 25 in Fig. 26 of Widegren illustrate UEs A and B sending respective MBIs (also referred to a token2-C and token1-C) to their respective PCFs (A and B), Widegren does not teach that either

act of sending “associates that media stream with the multimedia session.” Rather, Widegren teaches that the sending of the reservation messages that include the MBIs are part of the “GPRS quality of service reservation procedures (PDP context activation/creation)” used to establish the PDP contexts for the media packet access bearers. Dr. Almeroth’s alleged associations are established by generating the MBIs, not by the sending of the reservation messages.

192. The flaws in Dr. Almeroth’s argument are further demonstrated by Widegren’s teaching in connection with steps 21-24 and 25-28 in Fig. 26 that: “[a]fter the PRACK messaging is exchanged between the UE-A and UE-B, UE-A, PCF-A, PCF-B, and UE-B [i.e., after these elements possess their respective authorization tokens] each *independently generate* a complete local token ‘C’ corresponding to the media binding information.” EX1005 [0194] (emphasis added.) Thus, UE-A and PCF-A each independently generate the same MBI, and similarly for UE-B and PCF-B, so any alleged association between media stream and authorization token is achieved independently of sending the reservation messages Fig. 26. The UE does not need to send the MBI to the PCF *in order to* associate the media stream with the authorization token, because the PCF independently generates the same MBI. Dr. Almeroth’s assertion that sending the reservation messages containing the MBI establishes the alleged associations is unsupported in Widegren.

193. Adopting, *arguendo*, Dr. Almeroth's interpretation of Widegren's authorization token as corresponding to the "composition session identifier" of Claim 1, and Widegren's media streams as corresponding to "sessions" of Claim 1, Dr. Almeroth's assertions effectively rewrite limitation [1c] to be "associating two or more sessions with the composition session identifier **by generating an MBI,**" which is not a claim limitation at issue in this IPR.

194. For these reasons, Widegren does not teach or suggest "associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time" recited in limitation [1c].

6. *Widegren-793 does not cure Widegren's deficiencies as to Ground 1*

195. As noted above, Dr. Almeroth only relies on Widegren-793 for limitation [1e] and Claim 13. *Supra* VII.B. Thus, Dr. Almeroth does not argue that Widegren-793 teaches or suggests any of Claim 2, Claim 3, Claim 6, Claim 8, the "sessions" recited in Claim 1, the "managing associated sessions" recited in limitation [1pre], nor limitation [1c].

196. Further, in my opinion, Widegren-793 does not teach or suggest any of Claim 2, Claim 3, Claim 6, Claim 8, the "sessions" recited in Claim 1, the "managing associated sessions" recited in limitation [1pre], nor limitation [1c].

B. Widegren and Widegren-793 do not teach Claims 15-18 and 20

1. Widegren does not teach Claim 15

197. Dr. Almeroth relies on his arguments for Claim 1 for Claim 15.

EX1003 ¶¶121-130. I disagree with Dr. Almeroth.

198. Widegren does not teach or suggest Claim 15 for all the reasons discussed above that Widegren does not teach or suggest Claim 1. *Supra* IX.A.5. (demonstrating that Widegren does not teach or suggest “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c]).

199. Claim 15 is patentable over Widegren and Widegren-793 for the additional reason that Widegren does not teach or suggest limitation [15d(i)] “wherein the user equipment is configured to (i) provide the composition session identifier.” Dr. Almeroth asserts that limitation [15d(i)] is “substantially the same as Limitation 1a” and he “relied on the same evidence and reached the same conclusions with respect to both limitations.” EX1003 ¶127. I disagree with Dr. Almeroth.

200. Limitation [1a] recites “providing a composition session identifier for associating sessions in the network,” whereas limitation [15d(i)] recites “wherein the user equipment is configured to (i) provide the composition session identifier.” Limitation [15d(ii)] provides context for “provide the composition session identifier” recited in limitation [15d(i)]. Limitation [15d(ii)] recites “(ii) after

providing the composition identifier, exchange the composition session identifier with the network element.” If one applies the Board’s construction of “exchanging the composition identifier” to mean “sending the composition session identifier in either direction,” then the term, “provide the composition session identifier” in limitation [15d(i)], means more than sending the composition session identifier.

201. For limitation [1a], Dr. Almeroth does not cite any teaching or suggestion in Widegren that the UE provides the session identifier/authorization token, which is the alleged “composition session identifier.” *See id.* ¶¶86-88. To the contrary, as I noted in connection with limitation [2a], Widegren teaches the session identifier/authorization token is generated at the PCF, which is a network element. *Supra* IX.A.1.(a). Dr. Almeroth makes a design choice argument for limitation [2a] “the user equipment generating the composition identifier” (*supra* IX.A.1.(a)), but he makes no such argument for limitation [15d(i)].

202. For these reasons, Widegren does not teach Claim 15.

2. *Widegren-793 does not cure the deficiencies as to Ground 1*

203. Dr. Almeroth relies on his arguments for limitation [1e] for limitation [15f]. EX1003 ¶130. And Dr. Almeroth only relies on Widegren-793 for limitation [1e] and Claim 13. *Supra* VII.B. Dr. Almeroth does not argue that Widegren-793 teaches or suggests any of the limitations of Claim 15 that correspond to “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and

limitation [1c]. Further, Dr. Almeroth does not argue that Widegren-793 teaches or suggests limitation [15d(i)].

204. Further, in my opinion, Widegren-793 does not teach or suggest any of the limitations of Claim 15 that correspond to “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c], nor limitation [15d(i)].

3. *Claims 16-18 and 20*

205. Claims 16-18 and 20 depend from Claim 15. Claims 16-18 and 20 are patentable over Widegren and Widegren-793 for the same reasons that Claim 15 is patentable over Widegren and Widegren-793.

X. GROUND 2: WIDEGREN, WIDEGREN-793, AND ETSI TS 183 063 DO NOT RENDER OBVIOUS CLAIMS 7 AND 9

206. Claim 7 depends from Claim 6, and Claim 9 depends from Claim 8. Claims 7 and 9 are patentable for all the reasons discussed above that Claims 6 and 8 are patentable over Widegren and Widegren-793. *Supra* IX.A (discussing Ground 1).

207. ETSI TS 183 063 does not cure the deficiencies of Widegren and Widegren-793. The only limitation Dr. Almeroth cites ETSI TS 183 063 for is “broadcast (BC) session associated with a BC identifier broadcast (BC) session associated with a BC identifier (BCServiceID), a content-on-demand (CoD) session

associated with a CoD identifier (CoDID), a Targeted Advertisement Insertion (TAI) session associated with a TAI identifier, network personal video content (NPVC) session associated with a NPVR identifier (NPVRContentID), a user generated content (UGC) session associated with a UGC identifier, a Public Switched Telecommunications Network (PSTN) emulation session associated with a PSTN emulation identifier, or a shared content (SC) session associated with a SC identifier” recited in Claims 7 and 9. EX1003 ¶156.

208. Dr. Almeroth does not argue that ETSI TS 183 063 teaches or suggests any of Claim 8, “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c].

209. Further, in my opinion, ETSI TS 183 063 does not teach or suggest any Claim 8, “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c].

XI. GROUND 3: WIDEGREN, WIDEGREN-793, AND ASTROM DO NOT RENDER OBVIOUS CLAIMS 13 AND 23

210. Claim 13 depends from Claim 1, and thus includes the limitations of Claim 1. Claim 23 depends from Claim 21, and thus includes the limitations of Claim 21. Dr. Almeroth relies on his arguments for Claim 1 for Claim 21. EX1003 ¶¶144-145.

211. Widegren and Widegren-793 do not teach or suggest Claims 13 and 23 for all the reasons discussed above with respect to Claim 1. *Supra* IX.A.5. (demonstrating that Widegren does not teach or suggest “sessions” recited in Claim 1, “managing associated sessions” recited limitation [1pre] or limitation [1c]).

212. Astrom does not cure the deficiencies of Widegren and Widegren-793. Dr. Almeroth only relies on Astrom for: “wherein the network is an IP Multimedia Subsystem (IMS) network comprising an IMS core connected to a Service Control Function (SCF), wherein the SCF is configured for managing associated sessions between the network and the User Equipment, wherein the network element is the SCF” recited in Claim 13; and “wherein modifying the composition session, using the signaling in the composition session, comprises selectively pausing data streams of the two or more sessions in response to a detection of an incoming call destined for the user equipment” recited in Claim 23. EX1003 ¶¶168, 172, 177.

213. Dr. Almeroth does not argue that Astrom teaches or suggests any of “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c].

214. Further, in my opinion, Astrom does not teach or suggest any of “sessions” recited in Claim 1, “managing associated sessions” recited in limitation [1pre], and limitation [1c].

XII. OBJECTIVE INDICIA OF NONOBVIOUSNESS

A. KPN's Adopted Change Request to ETSI TISPAN 182.027 is Evidence of Industry Praise

215. Ericsson's expert in the District Court Case, Dr. Jeffay, admitted that Patent Owner "submitted an ETSI TISPAN Change Request related to the invention claimed in the '669 Patent" and that "this proposal ultimately was adopted in Section 8.22 Personalized Service Composition (PSC) procedures of ETSI TISPAN TS 182.027 'IPTV functions supported by the IMS subsystem.'" EX2004, at 5.

216. In addition to Dr. Jeffay's statements, in IPR2022-00557, I reviewed the next draft of ETSI 182.027 after the Change Request was submitted, version 3.1.3. I have resubmitted this document in this IPR as EX2007. Section 8.22 of version 3.1.3 of ETIS 182.027 shows the Change Request was adopted, as Dr. Jeffay stated. *Compare id.* at 106-108, *with* EX2003, 3-5 (proposed Section 8.22). Further, Annex H titled "Change history" shows the Change Request, numbered 19tTD080r4, was adopted on January 30, 2009, and has the title/comment "Procedure for Personal Service Composition." EX2007, 139.

217. In IPR2022-00557, I also reviewed the WG2 Meeting Report dated 19 - 23 January 2009. I have resubmitted this document in this IPR as EX2008. The WG2 Meeting Report dated 19 - 23 January 2009 states in section A.2.1 "Agreed CRs" for the Change Request. *Id.* 1, 6-7 (19tTD080r4 in A.2.1.7).

218. In IPR2022-00557, I compared the Change Request to Claims 1 and 21.

These comparisons are reproduced below.

219. A comparison of the Change Request to Claim 1 shows that the Change Request has nexus to and is reasonably commensurate with Claim 1:

Claim 1 of the '669 Patent	Change Request (EX2003)
[1pre] A method for managing associated sessions in a network, the network having a network element configured for managing associated sessions between the network and at least one user equipment, the method comprising:	<p>“This clause describes procedures for the PSC service where multiple BC and or CoD sessions are composed into a single Personalized Service Composition.” EX2003, 3.</p> <p>“This clause only applies when multiple BC and/or CoD sessions need to be associated with each other at the SCF and/or other functional entities.” EX2003, 3.</p>
[1a] providing a composition session identifier for associating sessions in the network;	“The UE generates a PSCid that correlates the different BC/CoD sessions in the PSC.” EX2003, 4.
[1b] after providing the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a first time;	“The UE initiates a PSC session with the SCF. The PSC session initiation request contains the PSCid” EX2003, 4.

<p>[1c] associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time, wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with the user equipment;</p>	<p>“The SCF initiates a BoC or CoD session to the UE, following the procedures of clause 8.3.1 Figure 13 or clause 8.4.1 Figure 21A. The session initiation request includes the PSCid which is used by the UE to correlate the incoming BC/CoD session initiation request with the PSC session.” EX2003, 4.</p> <p>“The SCF initiates additional BoC and/or CoD sessions to the UE to build the PSC. Step 4) may be repeated zero or more times.” EX2003, 4; <i>id.</i> Fig. 39F (step 4).</p>
<p>[1d] initiating establishment of a composition session, the composition session being a signaling session for facilitating management of the two or more sessions and exchanging the composition session identifier between the user equipment and the network element as part of said establishment, the composition</p>	<p>“The UE initiates a PSC session with the SCF.” EX2003, 4.</p> <p>“The association of BC and/or CoD sessions within a PSC session is needed to handle the PSC composite as a whole.</p> <ul style="list-style-type: none"> • Initiation of the PSC composite as a whole. • The SCF handling cases, where there are insufficient

<p>session being different from the two or more sessions;</p>	<p>resources for the PSC composite as a whole, and the SCF offering alternative solutions.</p> <ul style="list-style-type: none">• Modification the PSC by adding or removing PSC constituting BC/CoD sessions.• Synchronization of the associated media streams within the PSC session.• SCF-assisted termination of the PSC session as a whole.• N-PVR recording of a PSC composite.• Continue viewing the PSC composite on another device.• Bookmarking the PSC for future use.• Share the PSC with friends by sending a bookmark to the PSC.• Having a shared PSC content session with friends.• PSC trick play: pause, fast forward, rewind.
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	<ul style="list-style-type: none"> • SCF-initiated pausing of the PSC streams simultaneously to insert a targeted advertisement, a hurricane warning or other content.” <p>EX2003, 1-2.</p>
<p>[1e] modifying the composition session, wherein modifying the composition session comprises using signaling in the composition session to terminate all of the two or more sessions.</p>	<p>“SCF-assisted termination of the PSC session as a whole.” EX2003, 2.</p>

220. With respect to limitation [1d] and the Change Request, the SCF is signaling-only, the SCF provides no media data. The PSC session is with the SCF, so it can only be a signaling session. Further, the associated sessions are with the MF and are sessions in which media data is delivered.

221. A comparison of the Change Request to Claim 21 shows that the Change Request has nexus to and is reasonably commensurate with Claim 21:

Claim 21 of the '669 Patent	Change Request (EX2003)
<p>[21p] A method for managing associated sessions in a network, the network having a network element configured for managing associated</p>	<p>See description cited for [1pre], <i>supra</i></p>

<p>sessions between the network and at least one user equipment, the method comprising:</p>	
<p>[21a] providing a composition session identifier for associating sessions in the network;</p>	<p>See description cited for [1a], <i>supra</i></p>
<p>[21b] after providing the composition session identifier, exchanging the composition session identifier between a user equipment and the network element a first time;</p>	<p>See description cited for [1b], <i>supra</i></p>
<p>[21c] associating two or more sessions with the composition session identifier by exchanging the composition session identifier at least a second time, wherein exchanging the composition session identifier at least a second time comprises the network element exchanging the composition session identifier with the user equipment;</p>	<p>See description cited for [1c], <i>supra</i></p>
<p>[21d] initiating establishment of a composition session, the composition session being a signaling session for facilitating management of the two or more</p>	<p>See description cited for [1d], <i>supra</i></p>

sessions and exchanging the composition session identifier between the user equipment and the network element as part of said establishment, the composition session being different from the two or more sessions;	
[21e] modifying, using signaling in the composition session, all of the two or more sessions	“SCF-assisted termination of the PSC session as a whole.” EX2003, 2.

222. As seen from the comparison of the Change Request and Claims 1 and 21, the Change Request relates to an embodiment within the scope of the Challenged Claims.

223. As I concluded in IPR2022-00557, for these reasons, the Change Request (EX2003) is evidence of industry praise that supports the nonobviousness of the claims that were challenged by Ericsson: Claims 1-3, 6, 8, 10-12, 21-22, and 24-25. The Board found that Ericsson did not prove that Claims 2, 3, 6, and 8 are unpatentable. *Ericsson*, IPR2022-00557, Paper 34, at 60.

224. In view of the Board’s finding in IPR2022-00557 that “Patent Owner provides a showing that the Change Request ‘has nexus to and is reasonably commensurate with’ independent claims 1 and 21” and that “[s]eparate aspects of the Change Request are reflected in the dependent claims, discussed below, and are

more relevant in showing the nonobviousness of those claims,” *Ericsson*, IPR2022-00557, Paper 34, at 27-29, I have further compared the Change Request to Claims 2 and 6-9.

225. A comparison of the Change Request to Claim 2 shows that the Change Request has nexus to and is reasonably commensurate with Claim 2:

Claim 2 of the '669 Patent	Change Request (EX2003)
[2a] The method according to claim 1, wherein providing the composition identifier comprises: the user equipment generating the composition session identifier; and	“The UE makes a selection of a Personalized Service Composition (PSC) from the SSF. The PSC, to be composed from multiple BC and/or CoD sessions, is either preconfigured in the SSF or configured by the user. The UE generates a PSCid that correlates the different BC/CoD sessions in the PSC.” EX2003, at 4.
[2b] sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier.	“The UE initiates a PSC session with the SCF. The PSC session initiation request contains the PSCid and content identifiers of the PSC constituting BC/CoD sessions.” EX2003, at 4.

226. A comparison of the Change Request to Claim 6 shows that the Change Request has nexus to and is reasonably commensurate with Claim 6:

Claim 6 of the '669 Patent	Change Request (EX2003)
The method according to claim 1, wherein the method further comprises: the user equipment initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element, each request comprising the composition session identifier.	“The UE makes a selection of a Personalized Service Composition (PSC) from the SSF. The PSC, to be composed from multiple BC and/or CoD sessions, is either preconfigured in the SSF or configured by the user.” EX2003, at 4.

227. A comparison of the Change Request to Claim 7 shows that the Change Request has nexus to and is reasonably commensurate with Claim 7:

Claim 7 of the '669 Patent	Change Request (EX2003)
The method according to claim 6, wherein the two or more associated sessions comprise at least one of a broad cast (BC) session associated with a BC identifier (BCServiceID), a content-on-demand (CoD) session	“The UE initiates a PSC session with the SCF. The PSC session initiation request contains the PSCid and content identifiers of the PSC constituting BC/CoD sessions. Such content identifiers are for example

<p>associated with a CoID identifier (CoDID), a Targeted Advertisement Insertion (TAI) session associated with a TAI identifier, network personal video content (NPVC) session associated with a NPVR identifier (NPVRContentID), a user generated content (UGC) session associated with a UGC identifier, a Public Switched Telecommunications Network (PSTN) emulation session associated with a PSTN emulation identifier, or a shared content (SC) session associated with a SC identifier.</p>	<p>BCServiceId (clause 7.4.1), CoDId (clause 7.4.1), N-PVRContentId (clause 7.4.1), ad content id (clause 8.14.1) UGC content id (clause 8.9.2) and/or shared content identifier (see clause 8.21.2). It may also contain handling instructions, e.g. instruction for the case that there is insufficient bandwidth to constitute all requested BC/CoD sessions simultaneously.” EX2003, at 4.</p>
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228. A comparison of the Change Request to Claim 8 shows that the Change Request has nexus to and is reasonably commensurate with Claim 8:

Claim 8 of the '669 Patent	Change Request (EX2003)
<p>The method according to claim 1, wherein the method further comprises: the network element initiating the two or more associated sessions by sending two or more requests for a session to the user</p>	<p>“The SCF initiates a BoC or CoD session to the UE, following the procedures of clauses 8.3.1 Figure 13 or 8.4.1 Figure 21A. The session initiation request includes the PSCid which is used by the UE to correlate</p>

<p>equipment, each request comprising the composition session identifier.</p>	<p>the incoming BC/CoD session initiation request with the PSC session.” EX2003, at 4.</p> <p>“The SCF initiates additional BoC and/or CoD sessions to the UE to build the PSC. Step 4) may be repeated zero or more times.” EX2003, at 4.</p>
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229. A comparison of the Change Request to Claim 9 shows that the Change Request has nexus to and is reasonably commensurate with Claim 8:

<p>Claim 9 of the '669 Patent</p>	<p>Change Request (EX2003)</p>
<p>The method according to claim 8, wherein the two or more associated sessions comprise at least one of a broad cast (BC) session associated with a BC identifier (BCServiceID), a content-on-demand (CoD) session associated with a CoID identifier (CoDID), a Targeted Advertisement Insertion (TAI) session associated with a TAI identifier, network personal video content (NPVC)</p>	<p>“The UE makes a selection of a Personalized Service Composition (PSC) from the SSF. The PSC, to be composed from multiple BC and/or CoD sessions, is either preconfigured in the SSF or configured by the user.” EX2003, at 4.</p>

session associated with a NPVR identifier (NPVRContentID), a user generated content (UGC) session associated with a UGC identifier, a Public Switched Telecommunications Network (PSTN) emulation session associated with a PSTN emulation identifier, or a shared content (SC) session associated with a SC identifier.	
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230. As seen from the comparison of the Change Request and Claims 2 and 6-9, the Change Request relates to an embodiment within the scope of the Challenged Claims.

231. For these additional reasons, the Change Request is evidence of nonobviousness of the Challenged Claims.

B. KPN's Adopted Second Change Request to ETSI TISPAN 183.063 is Evidence of Industry Praise

232. With respect to the second Change Request KPN submitted for ETSI TISPAN TS 183.063, I reviewed the next draft of ETSI TISPAN TS 183.063 after the second Change Request, version 3.4.2. EX2010. Section 5.1 and 5.3 of version 3.4.2 of ETSI TISPAN 183.063 shows the Change Request was adopted. *Compare*

id. at 51-52 (Section 5.1.11), 78 (Section 5.3.10), *with* EX2009, 3-4 (proposed Sections 5.1 and 5.3). Further, Annex ZZZ titled “Change history” shows the second Change Request, again numbered 21bTD104r1, was adopted on August 31, 2009, and has the title/comment “Personalised Service Composition.” EX2010, 233.

233. I have also reviewed the WG3 Meeting Report dated 17 - 21 August 2009. EX2011. The WG3 Meeting Report dated 17 - 21 August 2009 states in section A.2 “List of WG approved CRs” for the second Change Request. *Id.* at 7 (21bTD104r1 in A.2). Page 17 of the WG3 Meeting Report indicates that the second Change Request was allocated a CR number without any changes from the original submission. *Id.* at 17.

234. A comparison of the second Change Request to Claim 2 shows that the second Change Request has nexus to and is reasonably commensurate with Claim 2.

Claim 2 of the '669 Patent	Second Change Request (EX2009)
[2a] The method according to claim 1, wherein providing the composition identifier comprises: the user equipment generating the composition session identifier; and	“The UE retrieves available services from SSF and composes a Personalized Service Composition (PSC). The PSC, is to be composed of multiple BC and/or CoD services., [sic] The UE generates a PSCid and makes a record of it. The PSCid should be globally unique.” EX2009, at 3.

<p>[2b] sending a request for initiating the composition session from the user equipment to the network element, the request comprising the composition session identifier.</p>	<p>“For all UE-initiated sessions in the PSC, the UE shall include the PSCid in the SDP offer in the initial INVITE request.</p> <ul style="list-style-type: none">• An "a=PSCid:<PSCid>" line indicates the PSCid <p>The UE shall correlate the session with the PSCid.</p> <p>UE-initiated BC session initiation is specified in clause 5.1.3.1. UE-initiated CoD session initiation is specified in clause 5.1.4.2. Other types of IPTV sessions may also be used in a PSC, including an ‘empty’ session that is used only to convey the PSCid.” EX2009, at 3.</p>
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235. With respect to limitation [2b] and the second Change Request, the initial invite is the initiation of the composition session, and an empty session is an example of a composition session containing only signaling.

236. A comparison of the second Change Request to Claim 3 shows that the second Change Request has nexus to and is reasonably commensurate with Claim 3.

Claim 3 of the '669 Patent	Second Change Request (EX2009)
<p>The method according to claim 2, wherein the request for initiating the composition session further comprises one or more session identifiers and, optionally, resource reservation information and/or resource allocation information associated with the one or more sessions identified by the session identifiers.</p>	<p>“For all UE-initiated sessions in the PSC, the UE shall include the PSCid in the SDP offer in the initial INVITE request.</p> <ul style="list-style-type: none"> • An "a=PSCid:<PSCid>" line indicates the PSCid <p>The UE shall correlate the session with the PSCid.</p> <p>UE-initiated BC session initiation is specified in clause 5.1.3.1. UE-initiated CoD session initiation is specified in clause 5.1.4.2. Other types of IPTV sessions may also be used in a PSC, including an ‘empty’ session that is used only to convey the PSCid.” EX2009, at 3.</p>

237. A comparison of the second Change Request to Claim 6 shows that the second Change Request has nexus to and is reasonably commensurate with Claim 6.

Claim 6 of the '669 Patent	Second Change Request (EX2009)
<p>The method according to claim 1, wherein the method further comprises: the user equipment initiating the two or more associated sessions by sending two or more session initiation requests for a session to the network element, each request comprising the composition session identifier.</p>	<p>“The Personalised Service Composition (PSC) service composes multiple BC and or CoD sessions into a PSC session. The PSCid is used to correlate the different BC/CoD sessions of the PSC.” EX2009, at 3.</p> <p>“For all UE-initiated sessions in the PSC, the UE shall include the PSCid in the SDP offer in the initial INVITE request.</p> <ul style="list-style-type: none"> • An "a=PSCid:<PSCid>" line indicates the PSCid <p>The UE shall correlate the session with the PSCid.</p> <p>UE-initiated BC session initiation is specified in clause 5.1.3.1. UE-initiated CoD session initiation is specified in clause 5.1.4.2. Other types of IPTV sessions may also be</p>

	used in a PSC, including an "empty" session that is used only to convey the PSCid.” EX2009, at 3.
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238. A comparison of the second Change Request to Claim 8 shows that the second Change Request has nexus to and is reasonably commensurate with Claim 8.

Claim 8 of the '669 Patent	Second Change Request (EX2009)
The method according to claim 1, wherein the method further comprises: the network element initiating the two or more associated sessions by sending two or more requests for a session to the user equipment, each request comprising the composition session identifier.	<p>“When the SCF initiates a session within a PSC, it shall include the PSCid in the SDP offer in the initial INVITE request. The PSCid should be globally unique.</p> <ul style="list-style-type: none"> • An a=PSCid:<PSCid> line indicates the PSCid <p>The SCF shall correlate the session with the PSCid.” EX2009, at 4.</p>

239. As seen from the comparison of the second Change Request and Claims 2, 3, 6, and 8, the second Change Request relates to an embodiment within the scope of the Challenged Claims.

240. For these reasons, the second Change Request (EX2009) is evidence of industry praise that supports the nonobviousness of Claims 2, 3, 6, and 8.

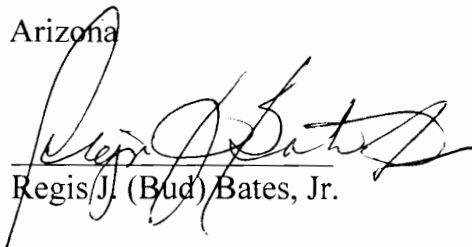
XIII. CONCLUSION

241. For the reasons set forth above, Claims 2-6, 8, 15-18, 20, and 23 are patentable over Widegren and Widegren-793, Claims 7 and 9 are patentable over Widegren, Widegren-793, and ETSI TS 183 063, and Claims 13 and 23 are patentable over Widegren, Widegren-793, and Astrom. Further, for the reasons set for the above, Samsung has not proven that Widegren, Widegren-793, ETSI TS 183 063, and Astrom render obvious any of Claims 2-9, 13, 15-18, 20, and 23.

242. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the results of these proceedings.

243. I recognize that I may be subject to cross-examination in this proceeding.

Executed on May 23, 2025 in Herber, Arizona


Regis J. (Bud) Bates, Jr.